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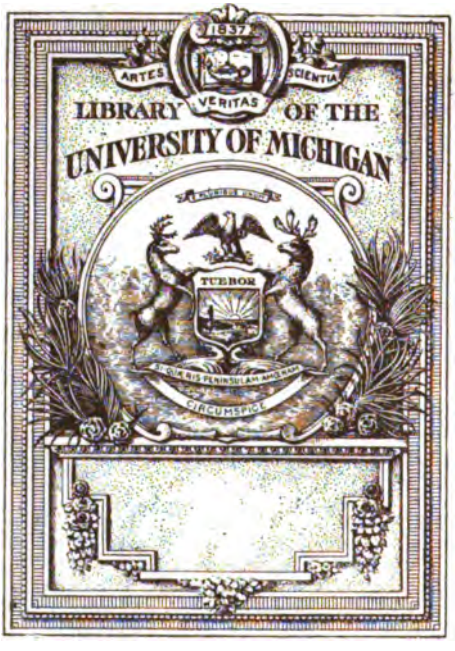
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JULES VERNE

WORKS of JULES VERNE

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INTRODUCTION TO VOLUME FIFTEEN.

IN "The Exploration of the World" we have this brilliant romancer holding his fancy under control and speaking for once in simplest truthfulness. He who had so thoroughly read up in geographies and books of travel that he might make stories from them, was perhaps of all men best fitted for the task of telling in earnest what real men had really done in the demarcation of the world. In these volumes there was no need for the writer to create romance. He had only to appreciate and make visible to others the romance which already existed in overflowing measure in the daring deeds of the great explorers.

The first book of this set, "The World Outlined," was published in 1878, but the final volume did not appear until several years later. Some portions of this history of exploration had been already prepared and written out for Americans in masterly fashion, as for instance the life of Columbus by Washington Irving, the conquests of Mexico and Peru by Prescott. These have been omitted from the present edition.

During the intervals of this work Verne was patiently gathering fresh material for its completion. How seriously and thoroughly the labor of preparation was undertaken he himself points out for us. He says: "In order to give this work all the accuracy possible, I have called in the aid of a man whom I with justice regard as one of the most competent geographers of the present day, M. Gabriel Marcel, attached to the Bibliothèque Nationale. With the advantage of his acquaintance with several foreign languages which are unknown to me, we have been able to go to the fountain-head, and to draw all our information from abso-

lutely original documents. Readers will, therefore, render to M. Marcel the credit due to him for his share in a work which will demonstrate what manner of men the great travelers have been, from the time of Hanno and Herodotus down to that of Livingstone and Stanley."

The Exploration of the World

BOOK I

The World Outlined

CHAPTER I

CELEBRATED TRAVELERS BEFORE THE CHRISTIAN ERA

HANNO, 505; HERODOTUS, 484; PYTHIAS, 340; NEARCHUS, 326; EUDOXUS, 146; CAESAR, 100; STRABO, 50

THE first traveler of whom we have any account in history, is Hanno, who was sent by the Carthaginian senate to colonize some parts of the Western coast of Africa. The account of this expedition was written in the Carthaginian language and afterwards translated into Greek. It is known to us now by the name of the "Periplus of Hanno." At what period this explorer lived, historians are not agreed, but the most probable account assigns the date B. C. 505 to his exploration of the African coast.

Hanno left Carthage with a fleet of sixty vessels of fifty oars each, carrying 30,000 persons, and provisions for a long voyage. These emigrants, for so we may call them, were destined to people the new towns that the Carthaginians hoped to found on the west coast of Libya, or as we now call it, Africa.

The fleet successfully passed the Pillars of Hercules, the rocks of Gibraltar and Ceuta which commanded the Strait, and ventured on the Atlantic, taking a southerly course. Two days after passing the Straits, Hanno anchored on the coast, and laid the foundation of the town of Thumiaterion.

Then he put to sea again, and doubling the cape of Soloïs, made fresh discoveries, and advanced to the mouth of a large African river, where he found a tribe of wandering shepherds camping on the banks. He only waited to conclude a treaty of alliance with them, before continuing his voyage southward. He next reached the Island of Cerne,

situated in a bay, and measuring five stadia in circumference, or as we should say at the present day, nearly 925 yards. According to Hanno's own account, this island is as far beyond the Pillars of Hercules, as these Pillars are from Carthage.

They set sail again, and Hanno reached the mouth of the river Chretes, which forms a sort of natural harbor, but as they endeavored to explore this river, they were assailed with showers of stones from the native negro race, inhabiting the surrounding country, and driven back. Hanno mentions finding large numbers of crocodiles and hippopotami in this river. Twelve days after this unsuccessful expedition, the fleet reached a mountainous region, where fragrant trees and shrubs abounded, and it then entered a vast gulf which terminated in a plain. This region appeared quite calm during the day, but after nightfall it was all illumined with masses of flame, which might have proceeded from fires lighted by the natives, or from the natural ignition of the dry grass when the rainy season was over.

In five days, Hanno doubled the Cape, known as the Hespera Keras; there, according to his own account, "he heard the sound of fifes, cymbals, and tambourines, and the clamor of a multitude of people." The soothsayers, who accompanied the party of Carthaginian explorers, counseled flight from this land of terrors, and, in obedience to their advice, he set sail again, still taking a southerly course. They arrived at a cape, which, stretching southwards, formed a gulf, called Notu Keras, and, according to M. D'Avezac, this gulf must have been the mouth of the river Ouro, which falls into the Atlantic almost within the Tropic of Cancer. At the lower end of this gulf, they found an island inhabited by a vast number of gorillas, which the Carthaginians mistook for hairy savages. They contrived to get possession of three female gorillas, but were obliged to kill them on account of their great ferocity.

This Notu Keras must have been the extreme limit reached by the Carthaginian explorers, and though some historians incline to the belief that they only went to Bojador, which is two degrees North of the tropics, it is more probable that the former account is the true one, and that Hanno, finding himself short of provisions, returned north-

wards to Carthage, where he had the account of his voyage engraved in the temple of Baal Moloch.

After Hanno, the most illustrious of ancient travelers was Herodotus, who has been called the "Father of History." It will serve our purpose better if we only speak of Herodotus as a traveler, not an historian, as we wish to follow him so far as possible through the countries that he traversed.

Herodotus was born at Halicarnassus, a town in Asia Minor, in the year B. C. 484. His family were rich, and having large commercial transactions they were able to encourage the taste for explorations which he showed. At this time there were many different opinions as to the shape of the earth: the Pythagorean school having even then begun to teach that it must be round. Herodotus took no part in this discussion, but still young, he left home with a view of exploring with great care all the then known world, and especially those parts of it of which there were but few and uncertain data.

He left Halicarnassus in 464, being then twenty years of age, and probably directed his steps first to Egypt, visiting Memphis, Heliopolis, and Thebes. He seems to have specially turned his attention to the overflow of the banks of the Nile, and he gives an account of the different opinions held as to the source of this river, which the Egyptians worshiped as one of their deities. "When the Nile overflows its banks," he says, "you can see nothing but the towns rising out of the water, and they appear like the islands in the Ægean Sea." He tells of the religious ceremonies among the Egyptians, their sacrifices, their ardor in celebrating the feasts in honor of their goddess Isis, which took place principally at Busiris (whose ruins may still be seen near Bushir), and of the veneration paid to both wild and tame animals, which were looked upon almost as sacred, and received funeral honors at their death. He depicts, in the most faithful colors, the Nile crocodile, its form, habits, and the way in which it is caught, and the hippopotamus, the momot, the phœnix, the ibis, and the serpents that were consecrated to the god Jupiter. Nothing can be more life-like than his accounts of Egyptian customs, and the notices of their habits, their games, and their way of embalming the dead. Then we have the his-

tory of the country from Menes, its first king, downwards to Herodotus's time, and he describes the building of the Pyramids under Cheops, the Labyrinth that was built a little above the Lake Mœris (of which the remains were discovered in A. D. 1799), Lake Mœris itself, whose origin he ascribes to the hand of man, and the two Pyramids which are situated a little above the lake. He seems to have admired many of the Egyptian temples, and especially that of Minerva at Sais, and of Vulcan and Isis at Memphis, and the colossal monolith that was three years in course of transportation from Elephantina to Sais, though 2,000 men were employed on the gigantic work.

After having carefully inspected everything of interest in Egypt, Herodotus went into Libya, little thinking that the continent he was exploring extended thence to the tropic of Cancer. He made special inquiries in Libya as to the number of its inhabitants, who were a simple nomadic race principally living near the sea-coast, and he speaks of the Ammonians, who possessed the celebrated temple of Jupiter Ammon, the remains of which have been discovered on the northeast side of the Libyan desert, about 300 miles from Cairo. Herodotus furnishes us with some very valuable information on Libyan customs; he describes their habits; speaks of the animals that infest the country, serpents of a prodigious size, lions, elephants, bears, asps, horned asses (probably the rhinoceros of the present day), and cynocephali, "animals with no heads, and whose eyes are placed on their chest," to use his own expression; foxes, hyenas, porcupines, wild zarus, panthers, etc. He winds up his description by saying that the only two aboriginal nations that inhabit this region are the Libyans and Ethiopians.

According to Herodotus the Ethiopians were at that time to be found above Elephantina, but commentators are induced to doubt if this learned explorer ever really visited Ethiopia, and if he did not, he may easily have learned from the Egyptians the details that he gives of its capital, Meroe, of the worship of Jupiter and Bacchus, and the longevity of the natives. There can be no doubt, however, that he set sail for Tyre in Phœnicia, and that he was much struck with the beauty of the two magnificent temples of Hercules. He next visited Tarsus and took advantage of

the information gathered on the spot, to write a short history of Phœnicia, Syria, and Palestine.

We next find that he went southward to Arabia, and he calls it the Ethiopia of Asia, for he thought the southern parts of Arabia were the limits of human habitation. He tells us of the remarkable way in which the Arabs kept any vow that they might have made; that their two deities were Uranius and Bacchus, and of the abundant growth of myrrh, cinnamon and other spices, and he gives a very interesting account of their culture and preparation.

We cannot be quite sure which country he next visited, as he calls it both Assyria and Babylonia, but he gives a most minute account of the splendid city of Babylon (which was the home of the monarchs of that country, after the destruction of Nineveh), and whose ruins are now only in scattered heaps on either side of the Euphrates, which flowed a broad, deep, rapid river, dividing the city into two parts. On one side of the river the fortified palace of the king stood, and on the other the temple of Jupiter Belus. Herodotus next speaks of the two queens, Semiramis and Nitocris, telling us of all the means taken by the latter to increase the prosperity and safety of her capital, and passing on to speak of the natural products of the country, the wheat, barley, millet, sesame, the vine, fig-tree and palm-tree. He winds up with a description of the costume of the Babylonians, and their customs, especially that of celebrating their marriages by the public crier.

After exploring Babylonia he went to Persia, and as the express purpose of his travels was to collect all the information he could relating to the lengthy wars that had taken place between the Persians and Grecians, he was most anxious to visit the spots where the battles had been fought. He sets out by remarking upon the custom prevalent in Persia, of not clothing their deities in any human form, nor erecting temples nor altars where they might be worshiped, but contenting themselves with adoring them on the tops of the mountains. He notes their domestic habits, their disdain of animal food, their taste for delicacies, their passion for wine, and their custom of transacting business of the utmost importance when they had been drinking to excess; their curiosity as to the habits of other nations, their love of pleasure, their warlike qualities, their

anxiety for the education of their children, their respect for the lives of all their fellow-creatures, even of their slaves, their horror both of debt and lying, and their repugnance to the disease of leprosy which they thought proved that the sufferer "had sinned in some way against the sun." The India of Herodotus, according to M. Vivien de St. Martin, only consisted of that part of the country that is watered by the five rivers of the Punjaub, adjoining Afghanistan, and this was the region where the young traveler turned his steps on leaving Persia. He thought that the population of India was larger than that of any other country, and he divided it into two classes, the first having settled habitations, the second leading a nomadic life. Those who lived in the eastern part of the country killed their sick and aged people, and ate them, while those in the north, who were a finer, braver, and more industrious race, employed themselves in collecting the auriferous sands. India was then the most easterly extremity of the inhabited world, as he thought, and he observes, "that the two extremities of the world seem to have shared nature's best gifts, as Greece enjoyed the most agreeable temperature possible," and that was his idea of the western limits of the world.

Media is the next country visited by this indefatigable traveler, and he gives the history of the Medes, the nation which was the first to shake off the Assyrian yoke. They founded the great city of Ecbatana, and surrounded it with seven concentric walls. They became a separate nation in the reign of Deioces. After crossing the mountains that separate Media from Colchis, the Greek traveler entered the country, made famous by the valor of Jason, and studied its manners and customs with the care and attention that were among his most striking characteristics.

Herodotus seems to have been well acquainted with the geography of the Caspian Sea, for he speaks of it as a sea "quite by itself" and having no communication with any other. He considered that it was bounded on the west by the Caucasian Mountains and on the east by a great plain inhabited by the Massagetæ, who, both Arian and Diodorus Siculus think, may have been Scythians. These Massagetæ worshiped the Sun as their only deity, and sacrificed horses in its honor. He speaks here of two

large rivers, one of which, the Araxes, would be the Volga, and the other, that he calls the Ister, must be the Danube. The traveler then went into Scythia, and he thought that the Scythians were the different tribes inhabiting the country that lay between the Danube and the Don, in fact a considerable portion of European Russia. He found the barbarous custom of putting out the eyes of their prisoners was practiced among them, and he notices that they only wandered from place to place without caring to cultivate their land. Herodotus relates many of the fables that make the origin of the Scythian nation so obscure, and in which Hercules plays a prominent part. He adds a list of the different tribes that composed the Scythian nation, but he does not seem to have visited the country lying to the north of the Euxine, or Black Sea. He gives a minute description of the habits of these people, and expresses his admiration for the Pontus Euxinus. The dimensions that he gives of the Black Sea, the Bosphorus, of the Propontis, the Palus Mæotis and of the Ægean Sea, are almost exactly the same as those given by geographers of the present day. He also names the large rivers that flow into these seas. The Ister or Danube, the Borysthenes or Dnieper, the Tanais, or Don; and he finishes by relating how the alliance, and afterwards the union between the Scythians and Amazons took place, which explains the reason why the young women of that country are not allowed to marry before they have killed an enemy and established their character for valor.

After a short stay in Thrace, during which he was convinced that the Getæ were the bravest portion of this race, Herodotus arrived in Greece, which was to be the termination of his travels, the country where he hoped to collect the only documents still wanting to complete his history, and he visited all the spots that had become illustrious by the great battles fought between the Greeks and Persians. He gives a minute description of the Pass of Thermopylæ, and of his visit to the plain of Marathon, the battle-field of Platæa, and his return to Asia Minor, whence he passed along the coast on which the Greeks had established several colonies. Herodotus can only have been twenty-eight years of age when he returned to Halicarnassus in Caria, for it was in B. C. 456 that he read the history of his trav-

els at the Olympic Games. His country was at that time oppressed by Lygdamis, and he was exiled to Samos; but though he soon after rose in arms to overthrow the tyrant, the ingratitude of his fellow-citizens obliged him to return into exile. In 444 he took part in the games at the Pantheon, and there he read his completed work, which was received with enthusiasm. Towards the end of his life he retired to Thurium in Italy, where he died, B. C. 406, leaving behind him the reputation of being the greatest traveler and the most celebrated historian of antiquity.

After Herodotus we must pass over a century and a half, and only note, in passing, the physician Ctesias, a contemporary of Xenophon, who published the account of a voyage to India that he really never made; and we shall come in chronological order to Pythias, who was at once a traveler, geographer, and historian, one of the most celebrated men of his time. It was about the year B. C. 340 that Pythias set out from the columns of Hercules with a single vessel, but instead of taking a southerly course like his Carthaginian predecessors, he went northwards, passing by the coasts of Iberia and Gaul to the furthest points which now form the Cape of Finisterre, and then he entered the English Channel and came upon the English coast—the British Isles—of which he was to be the first explorer. He disembarked at various points on the coast and made friends with the simple, honest, sober, industrious inhabitants, who traded largely in tin.

Pythias ventured still further north, and went beyond the Orcades Islands to the furthest point of Scotland, and he must have reached a very high latitude, for during the summer the night only lasted two hours. After six days further sailing, he came to lands which he calls Thule, probably the Jutland or Norway of the present day, beyond which he could not pass, for he says, "there was neither land, sea, nor air there." He retraced his course, and changing it slightly, he came to the mouth of the Rhine, to the country of the Ostians, and, further inland, to Germany. Thence he visited the mouth of the Tanais, that is supposed to be the Elbe or the Oder, and he returned to Marseilles, just a year after leaving his native town. Pythias, besides being such a brave sailor, was a remarkably scientific man; he was the first to discover the influence

that the moon exercises on the tides, and to notice that the polar star is not situated at the exact spot at which the axis of the globe is supposed to be.

Some years after the time of Pythias, about B. C. 326, another Greek traveler made his name famous. This was Nearchus, a native of Crete, one of Alexander's admirals. He was charged to visit all the coast of Asia from the mouth of the Indus to that of the Euphrates. When Alexander first resolved that this expedition should take place, which had for its object the opening up of a communication between India and Egypt, he was at the upper part of the Indus. He furnished Nearchus with a fleet of thirty-three galleys, of some vessels with two decks, and a great number of transport ships, and 2,000 men. Nearchus came down the Indus in about four months, escorted on either bank of the river by Alexander's armies, and after spending seven months in exploring the Delta, he set sail and followed the west line of what we call Beloochistan in the present day.

He put to sea on the second of October, a month before the winter winds blow in a direction favorable to his purpose, so that the commencement of his voyage was disastrous, and in forty days he had scarcely made eighty miles in a westerly direction. He touched first at Stura and at Corestis, which do not seem to answer to any of the now-existing villages on the coast; then at the Island of Crocala, which forms the bay of Caranthia. Beaten back by contrary winds, after doubling the cape of Monze, the fleet took refuge in a natural harbor that its commander thought that he could fortify as a defence against the attacks of the barbarous natives, who, even at the present day, keep up their character as pirates.

After spending twenty-four days in this harbor, Nearchus put to sea again on the 3d of November. Severe gales obliged him to keep very near the coast, and he was obliged to take all possible precautions to defend himself from the attacks of the ferocious Beloochees, who are described by eastern historians "as a barbarous nation, with long disheveled hair, and long flowing beards, who are more like bears or satyrs than human beings." Up to this time, however, no serious disaster had happened to the fleet, but on the 10th of November in a heavy gale two

galleys and a ship sank. Nearchus then anchored at Crocala, and there he was met by a ship laden with corn that Alexander had sent out to him, and he was able to supply each vessel with provisions for ten days.

After many disasters and a skirmish with some of the natives, Nearchus reached the extreme point of the land of the Orites, which is marked in modern geography by Cape Morant. Here, he states in his narrative that the rays of the sun at mid-day are vertical, and therefore there are no shadows of any kind; but this is surely a mistake, for at this time in the Southern hemisphere the sun is in the Tropic of Capricorn; and, beyond this, his vessels were always some degrees distant from the Tropic of Cancer, therefore even in the height of summer this phenomenon could not have taken place, and we know that his voyage was in winter.

Circumstances seemed now rather more in his favor; for the time of the eastern monsoon was over, when he sailed along the coast which is inhabited by a tribe called Ichthyophagi, who subsist solely on fish, and from the failure of all vegetation are obliged to feed even their sheep upon the same food. The fleet was now becoming very short of provisions; so after doubling Cape Posmi, Nearchus took a pilot from those shores on board his own vessel, and with the wind in their favor they made rapid progress, finding the country less bare as they advanced, a few scattered trees and shrubs being visible from the shore. They reached a little town, of the name of which we have no record, and as they were almost without food Nearchus surprised and took possession of it, the inhabitants making but little resistance. Canasida, or Churbar as we call it, was their next resting-place, and at the present day the ruins of a town are still visible in the bay. But their corn was now entirely exhausted, and though they tried successively at Canate, Trois, and Dagasira for further supplies, it was all in vain, these miserable little towns not being able to furnish more than enough for their own consumption. The fleet had neither corn nor meat, and they could not make up their minds to feed upon the tortoises that abound in that part of the coast.

Just as they entered the Persian Gulf they encountered an immense number of whales, and the sailors were so

terrified by their size and number, that they wished to fly; it was not without much difficulty that Nearchus at last prevailed upon them to advance boldly, and they soon scattered their formidable enemies.

Having changed their westerly course for a northeasterly one, they soon came upon fertile shores, and their eyes were refreshed by the sight of corn-fields and pasture-lands, interspersed with all kinds of fruit-trees except the olive. They put into Badis or Jask, and after leaving it and passing Maceta or Mussendon, they came in sight of the Persian Gulf, to which Nearchus, following the geography of the Arabs, gave the misnomer of the Red Sea.

They sailed up the gulf, and after one halt reached Harmozia, which has since given its name to the little island of Ormuz. There he learned that Alexander's army was only five days' march from him, and he disembarked at once, and hastened to meet it. No news of the fleet having reached the army for twenty-one weeks, they had given up all hope of seeing it again, and great was Alexander's joy when Nearchus appeared before him, though the hardships he had endured had altered him almost beyond recognition. Alexander ordered games to be celebrated and sacrifices offered up to the gods; then Nearchus returned to Harmozia, as he wished to go as far as Susa with the fleet, and set sail again, having invoked Jupiter the Deliverer.

He touched at some of the neighboring islands, probably those of Arek and Kismis, and soon afterwards the vessel ran aground, but the advancing tide floated them again, and after passing Bestion, they arrived at the island of Keish, that is sacred to Mercury and Venus. This was the boundary-line between Karamania and Persia. As they advanced along the Persian coast, they visited different places, Gillam, Indarabia, Shevou, etc., and at the last-named was found a quantity of wheat which Alexander had sent for the use of the explorers.

Some days after this they came to the mouth of the river Araxes, that separates Persia from Susiana, and thence they reached a large lake situated in the country now called Darghestan, and finally anchored near the village of Degela, at the mouth of the Euphrates, having accomplished their project of visiting all the coast lying between the Euphrates and Indus. Nearchus returned a

second time to Alexander, who rewarded him magnificently, and placed him in command of his fleet. Alexander's wish, that the whole of the Arabian coast should be explored as far as the Red Sea, was never fulfilled, as he died before the expedition was arranged.

It is said that Nearchus became governor of Lysia and Pamphylia, but in his leisure time he wrote an account of his travels, which has unfortunately perished, though not before Arian had made a complete analysis of it in his Historia Indica. It seems probable that Nearchus fell in the battle of Ipsa, leaving behind him the reputation of being a very able commander; his voyage may be looked upon as an event of no small importance in the history of navigation.

We must not omit to mention a most hazardous attempt made in B. C. 146, by Eudoxus of Cyzicus, a geographer living at the court of Euergetes II, to sail round Africa. He had visited Egypt and the coast of India, when this far greater project occurred to him, one which was only accomplished sixteen hundred years later by Vasco da Gama. Eudoxus fitted out a large vessel and two smaller ones, and set sail upon the unknown waters of the Atlantic. How far he took these vessels we do not know, but after having had communication with some natives, whom he thought were Ethiopians, he returned to Mauritania. Thence he went to Tiberia, and made preparations for another attempt to circumnavigate Africa, but whether he ever set out upon this voyage is not known; in fact some learned men are even inclined to consider Eudoxus an impostor.

We have still to mention two names of illustrious travelers, living before the Christian era; those of Cæsar and Strabo. Cæsar, born B. C. 100, was pre-eminently a *conqueror,* not an *explorer,* but we must remember, that in the year B. C. 58, he undertook the conquest of Gaul, and during the ten years that were occupied in this vast enterprise, he led his victorious Legions to the shores of Great Britain.

As to Strabo, who was born in Cappadocia B. C. 50, he distinguished himself more as a geographer than a traveler, but he traveled through the interior of Asia, and visited Egypt, Greece, and Italy, living many years in Rome, and dying there in the latter part of the reign of Tiberius.

Strabo wrote a geography in seventeen books, of which the greater part has come down to us, and this work, with that of Ptolemy, are the two most valuable legacies of ancient to modern geographers.

CHAPTER II

CELEBRATED TRAVELERS FROM THE FIRST TO THE NINTH CENTURY

PAUSANIAS, 174; FA-HIAN, 399; COSMOS INDICOPLEUSTES, 500; ARCULPHE, 700; WILLIBALD, 725; SOLEYMAN, 851

IN the first two centuries of the Christian era, the study of geography received a great stimulus from the advances of other branches of science, but travelers, or rather explorers of new countries were very few in number. Pliny in the year A. D. 23, devoted the third, fourth, fifth, and sixth books of his Natural History to geography, and in A. D. 50, Hippalus, a clever navigator, discovered the laws governing the monsoon in the Indian Ocean, and taught sailors how they might deviate from their usual course, so as to make these winds subservient to their being able to go to and return from India in one year. Arian, a Greek historian, born A. D. 105, wrote an account of the navigation of the Euxine or Black Sea, and pointed out as nearly as possible, the countries that had been discovered by explorers who had lived before his time; and Ptolemy the Egyptian, about A. D. 175, making use of the writings of his predecessors, published a celebrated geography, in which, for the first time, places and cities were marked in their relative latitude and longitude on a mathematical plan.

The first traveler of the Christian era, whose name has been handed down to us, was Pausanias, a Greek writer, living in Rome in the second century, and whose account of his travels bears the date of A. D. 175. Pausanias did for ancient Greece what Joanne, the industrious and clever Frenchman did for the other countries of Europe, in compiling the "Traveler's Guide." His account, a most re-

liable one on all points, and most exact even in details, was one upon which travelers of the second century might safely depend in their journeys through the different parts of Greece.

Pausanias gives a minute description of Attica, and especially of Athens and its monuments, tombs, temples, citadel, academy, columns, and of the Areopagus. From Attica Pausanias went to Corinth, and then explored the Islands of Ægina and Methana; Sparta, the Island of Cerigo, Messene, Achaia, Arcadia, Bœotia, and Phocis. The roads in the provinces and even the streets in the towns, are mentioned in his narrative, as well as the general character of the country through which he passed; although we can scarcely say that he added any fresh discoveries to those already made, he was one of those careful travelers whose object was more to obtain exact information, than to make new discoveries. His narrative has been of the greatest use to all geographers and writers upon Greece and the Peloponnesus, and an author of the sixteenth century has truly said that this book is "a most ancient and rare specimen of erudition."

It was about a hundred and thirty years after the Greek historian, in the fourth century, that a Chinese monk undertook the exploration of the countries lying to the west of China. The account of his travels is still extant, and we may well agree with M. Charton when he says that "this is a most valuable work, carrying us beyond our ordinarily narrow view of western civilization."

Fa-Hian, the traveler, was accompanied by several monks; wishing to leave China by the west, they crossed more than one chain of mountains, and reached the country now called Kantchou, which is not far from the great wall. They crossed the river Cha-ho, and a desert that Marco Polo was to explore eight hundred years later. After seventeen days' march they reached the Lake of Lobnor in Turkestan. From this point all the countries that the monks visited were alike as to manners and customs, the languages alone differing. Being dissatisfied with the reception that they met with in the country of the Ourgas, who are not a hospitable people, they took a southeasterly course towards a desert country, where they had great difficulty in crossing the rivers; and, after a thirty-

five days' march, the little caravan reached Tartary in the kingdom of Khotan, which contained according to Fa-Hian, "Many times ten thousand holy men." Here they met with a cordial welcome, and after a residence of three months were allowed to assist at the "Procession of the Images," a great feast, in which both Brahmins and Buddhists join, and all the idols are placed upon magnificently decorated cars, and paraded through streets strewn with flowers, amid clouds of incense.

The feast over, the monks left Khotan for Koukonyar, and after resting there fifteen days, we find them further south in the Balistan country of the present day, a cold and mountainous district, where wheat was the only grain cultivated, and where Fa-Hian found in use the curious cylinders on which prayers are written, and which are turned by the faithful with the most extraordinary rapidity. Thence they went to the eastern part of Afghanistan; it took them four weeks to cross the mountains, in the midst of which, and the never-melting snow, they are said to have found venomous dragons.

On the further side of this rocky chain the travelers found themselves in Northern India, where the country is watered by the streams which, further on, form the Sinde or Indus. After traversing the kingdoms of On-tchang, Su-ho-to, and Kian-tho-wei, they arrived at Fo-loo-cha, which must be the town of Peshawur, standing between Cabul and the Indus, and twenty-four leagues farther west, they came to the town of Hilo, built on the banks of a tributary of the river Kabout. In all these towns Fa-Hian specially notices the feasts and religious ceremonies practiced in the worship of Fo or Buddha.

When the monks left Kito, they were obliged to cross the Hindoo-Koosh mountains, lying between Turkestan and the Gandhara, the cold being so intense that one of their party sank under it. After enduring great hardships they reached Banoo, a town that is still standing, and then, after again crossing the Indus, they entered the Punjaub. Thence, descending towards the southeast, with a view of crossing the northern part of the Indian Peninsula, they reached Mathura, a town in the province of Agra, and crossing the great salt desert which lies to the east of the Indus, traveled through a country that Fa-Hian calls "a

happy kingdom, where the inhabitants are good and honest, needing neither laws nor magistrates, and indebted to none for their support; without markets or wine merchants, and living happily, with plenty of all that they required, where the temperature was neither hot nor cold." This happy kingdom was India. Fa-Hian followed a southeasterly route, and came to Feroukh-abad, where Buddha is said to have alighted as he came down from heaven, the Chinese traveler dwelling much upon the Buddhist Creed. Thence he visited the town of Kanoji, standing on the right bank of the Ganges, that he calls Heng. This is the very center of Buddhism. Wherever Buddha is supposed to have rested, his followers have erected high towers in his honor. The travelers visited the temple of Tchihouan, where for twenty-five years Fo practiced the most severe mortifications, and where he is said to have given sight to five hundred blind men.

They set out again, passing Kapila and Goruckpoor, on the frontier of Nepaul, all made famous by Fo's miracles, and then reached the celebrated town of Palian-foo, in the delta of the Ganges, in the kingdom of Magadha. This was a fertile tract of country inhabited by a civilized, upright people, who loved all philosophic researches. After climbing the peak of Vautour, which stands at the source of the Dyardanes and Banourah rivers, Fa-Hian descended the Ganges, visited the temple of Issi-paten that was frequented by magicians and astrologers, reached Benares, "the kingdom of splendors," and a little lower down, the town of Tomo-li-ti, situated at the mouth of the river, a short distance from the site of Calcutta in the present day.

Fa-Hian found a party of merchants just preparing to put to sea with the intention of going to Ceylon; he sailed with them, and in fourteen days landed on the shores of the ancient Taprobana, of which the Greek merchant, Jamboulos, had given a curious account some centuries previously. Here the Chinese monk found all the traditions and legends regarding the god Fo, and passed two years in searching ancient manuscripts. He left Ceylon for Java, where he landed after a rough voyage, in the course of which, when the sky was overclouded, he says, "we saw nothing but great waves dashing one against another, lightning, crocodiles, tortoises, and monsters of the deep."

He spent five months in Java, and then set sail for Canton; but the winds were again unfavorable, and after undergoing great hardships he landed at the town of Chantoung of the present day; then having spent some time at Nankin he returned to Fi-an-foo, his native town, after an absence of eighteen months. Such is the account of Fa-Hian's travels, which have been well translated by M. Abel de Rémusat, and which give very interesting details of Indian and Tartar customs, especially those relating to their religious ceremonies.

The next traveler to the Chinese monk, in chronological order, is an Egyptian called Cosmos Indicopleustes, a name that M. Charton renders as "Cosmographic traveler in India." He lived in the sixth century, and was a merchant of Alexandria, who, on his return from visiting Ethiopia and part of Asia, entered a monastery.

His narrative is called the "Christian Topography of the Universe." It gives no details of its author's voyages, but begins with cosmographic discussions, to prove that the world is square, and enclosed in a great oblong coffer with all the other planets. This is followed by some dissertations on the function of the angels, and a description of the dress of the Jewish Priests. Cosmos also gives the natural history of the animals of India and Ceylon, and notices the rhinoceros and buffalo, which can be made of use for domestic purposes, the giraffe, the wild ox, the musk that is hunted for its "perfumed blood," the unicorn, which he considers a real animal and not a myth, the wild boar, the hippopotamus, the phoca, the dolphin, and the tortoise. Afterwards, Cosmos describes the pepper-plant, as a frail and delicate shrub, like the smallest tendrils of the vine, and the cocoa-tree, whose fruit has a fragrance "equal to that of a nut."

From the earliest times of the Christian era there has been a great love for visiting the Holy Land, the cradle of the new religion. These pilgrimages became more and more frequent, and we have many names left to us of those who visited Palestine during the first centuries of Christianity.

One of these pilgrims, the French Bishop Arculphe, who lived towards the end of the seventh century, has left us an account of his travels.

He sets out by giving a topographical description of the site of Jerusalem, and describes the wall that surrounds the holy city, then the circular church built over the Holy Sepulcher, the tomb of our Lord Jesus Christ, and the stone that closed it, the church dedicated to the Virgin Mary, the church built upon Calvary, and the basilica of Constantine on the site of the place where the real cross was found. These various churches are united in one building, which also encloses the Tomb of Christ, and Calvary, where our Lord was crucified.

Arculphe then descended into the Valley of Jehoshaphat, which is situated to the east of the city, and contains the church that covers the tomb of the Virgin; he also saw that of Absalom, which he calls the Tower of Jehoshaphat. He describes the Mount of Olives that faces the city beyond the valley, and he prayed in the cave where Jesus prayed. He also went to Mount Zion, which stands outside the town on the south side; he notices the gigantic fig-tree, on which, according to tradition, Judas Iscariot hanged himself, and he visited the church of the guest-chamber, now destroyed.

After making the tour of the city by the Valley of Siloam, and ascending by the brook Cedron, the bishop returned to the Mount of Olives, which was covered with waving wheat and barley, grass and wild flowers, and he describes the place where Christ ascended from the summit of the mountain. On this spot a large church has been built, with three arched porticoes that are not roofed over or covered in any way, but are open to the sky. "They have not roofed in this church," says the bishop, "because it was the place whence our Saviour ascended upon a cloud, and the space open to heaven allows the prayers of the faithful to ascend thither. For when they paved this church they could not lay the pavement over the place where our Lord's feet had rested, as, when the stones were laid upon that spot, the earth, as though impatient of anything not divine resting upon it, threw them up again before the workmen. Beyond this, the dust bears the impress of the divine feet, and though, day by day, the faithful who visit the spot efface the marks, they immediately reappear and may be seen perpetually."

After having explored the neighborhood of Bethany in

the midst of the groves of olives, where the grave of Lazarus is said to be, and where the church, standing on the right hand is supposed to mark the spot where our Lord usually conversed with His disciples, Arculphe went to Bethlehem, which is a short distance from the holy city. He describes the birthplace of our Lord, a natural cave, hollowed out of the rock at the eastern end of the village, the church, built by St. Helena, the tombs of the three shepherds, upon whom the heavenly light shone at the birth of our Saviour, the burial-places of the patriarchs, Abraham, Isaac, and Jacob, and that of Rachel, and he visited the oak of Mamre, under which Abraham received the visit of the angels. Thence, Arculphe went to Jericho, or rather the place where the town once stood, whose walls fell at the sound of Joshua's trumpets. He explored the place where the children of Israel first rested in the land of Canaan after crossing the river Jordan, and he speaks of the church of Galgala, where the twelve stones are placed, which the children of Israel took from the river when they entered the promised land. He followed the course of the Jordan, and found near one of the bends of the river on the right bank, and among the most beautiful scenery, about an hour's walk from the Dead Sea, the place where our Lord was baptized by St. John the Baptist. A cross is placed to mark the spot, but when the river is swollen, it is covered by the water.

After examining the banks of the Dead Sea and tasting its brackish water, he viewed the source of the Jordan, at the foot of Libanus, and explored the greater part of the Lake of Tiberias, visiting the well where the woman of Samaria gave our Lord the water He so much needed, seeing the fountain in the desert of which St. John the Baptist drank, and the great plain of Gaza, where our Lord blessed the five loaves and the two fishes, and fed the multitude. Next he went down to Capernaum, then visited Nazareth, where our Lord spent His childhood, and ended His journey at Mount Tabor in Galilee.

The bishop's narrative contains both geographical and historical accounts of other places, beyond those immediately connected with our Lord's life on earth. He visited the royal city of Damascus, which is watered by four large rivers. Also Tyre, the chief town of Phœnicia.

He speaks of Alexandria, once the capital of Egypt, which he reached forty days after leaving Jaffa, and lastly, of Constantinople, where he often visited the large church in which "the wood of the cross is preserved, upon which the Saviour suffered for the salvation of the human race."

The account of this journey was written by the Abbé de St. Columban at the dictation of the bishop, and not many years afterwards the same journey was undertaken by an English pilgrim, and accomplished in much the same way. The name of this pilgrim was Willibald, a member of a rich family living at Southampton, who, on his recovery from a long illness, dedicated him to God's service. All his early life was spent in holy exercises in the monastery of Woltheim; when he was grown up he had the most intense wish to see St. Peter's at Rome, and was so set upon this, that it induced his father, brother, and young sister to wish to go there also; they embarked at Southampton in the spring of 721, and making their way up the Seine, they landed at Rouen. We have but few details of the journey to Rome, but Willibald mentions that after passing through Cortona and Lucca, at which latter place his father sank under the fatigue of the journey and died, he reached Rome in safety with his brother and sister, and passed the winter there, but they were all in turn attacked with fever. When Willibald regained his health, he determined to continue his journey to the Holy Land. He sent his brother and sister back to England, while he joined some monks who were going in the same direction as himself. They went by Terracina and Gaeta to Naples, and set sail for Reggio in Calabria, and Catania and Syracuse in Sicily, whence they again embarked, and, after touching at Cos and Samos, landed at Ephesus in Asia Minor, where they visited the tombs of St. John the Evangelist, of Mary Magdalene, and of the seven sleepers of Ephesus, that is, seven Christians martyred in the time of the Emperor Decius.

They made some stay at Patara and at Mitylene, and then went to Cyprus and Paphos; we next find the party, seven in number, at Edessa, visiting the tomb of St. Thomas the Apostle. Here they were arrested as spies,

and thrown into prison by the Saracens, but the king, on the petition of a Spaniard, set them at liberty. As soon as they were set free they left the town in great haste, and from that time their route is almost the same as that of the Bishop Arculphe; they visited Damascus, Nazareth, Cana, where they saw a wonderful amphora on Mount Tabor, where our Lord was transfigured, and the Lake of Tiberias, where St. Peter walked upon the water; Magdala, where Lazarus and his sister dwelt; Capernaum, where our Lord raised to life the son of the nobleman; Bethsaida in Galilee, the native place of St. Peter and St. Andrew; Chorazin, where our Lord cured those possessed with devils; Cæsarea, and the spot where our Lord was baptized, as well as Jericho and Jerusalem.

They also went to the Valley of Jehoshaphat, the Mount of Olives, and to Bethlehem, the scene of the murder of the Innocents by Herod, and Gaza. While they were at Gaza, Willibald tells us that he suddenly became blind, while he was in the church of St. Matthias, and only recovered his sight two months afterwards, as he entered the church of the Holy Cross at Jerusalem. He went through the valley of Diospolis or Lydda, ten miles from Jerusalem, and then went to Tyre and Sidon, and thence by Libanus, Damascus, Cæsarea, and Emmaus, back to Jerusalem, where the travelers spent the winter.

This was not to be the limit of their explorations, for we hear of them at Ptolemais, Emesa, Jerusalem, Damascus, and Samaria, where St. John the Baptist is said to have been buried, and at Tyre, where it must be confessed that Willibald defrauded the revenue of that time by smuggling some balsam that was very celebrated, and on which a duty was levied. On quitting Tyre they went to Constantinople and lived there for two years before returning by Sicily, Calabria, Naples, and Capua. The English pilgrim reached the monastery of Monte Cassino, just ten years after his first setting out on his travels; but his time of rest had not yet come, as he was appointed to a bishopric in Franconia by Pope Gregory III. He was forty-one years of age when he was made bishop, and he lived forty years afterwards. In 938 he was canonized by Leo VII.

We will conclude the list of celebrated travelers living

between the first and ninth centuries, by giving a short account of Soleyman, a merchant of Bassorah, who, starting from the Persian Gulf, arrived eventually on the shores of China. This narrative is in two distinct parts, one written in 851, by Soleyman himself, who was the traveler, and the other in 878 by a geographer named Abou-Zeyd Hassan with the view of completing the first. Renaud, the orientalist, is of opinion that this narrative "has thrown quite a new light on the commercial transactions that existed in the ninth century between Egypt, Arabia, and the countries bordering on the Persian Gulf on one side, and the vast provinces of India and China on the other."

Soleyman, as we have said, started from the Persian Gulf after having taken in a good supply of fresh water at Muscat, and visited first, the second sea, or that of Oman. He noticed a fish of enormous size, probably a spermaceti whale, which the seamen endeavored to frighten away by ringing a bell, then a shark, in whose stomach they found a smaller shark, enclosing in its turn one still smaller, "both alive," says the traveler, which is manifestly an exaggeration; then, after describing the remora, the dactyloptera, and the porpoise, he speaks of the sea near the Maldive Islands in which he counted an enormous number of islands; among them he mentions Ceylon by its Arabian name, with its pearl fisheries; Sumatra, inhabited by cannibals, and rich in gold mines; Nicobar, and the Andaman Islands, where cannibalism still exists even at the present day. "This sea," he says, "is subject to fearful water-spouts which wreck the ships and throw on its shores an immense number of dead fish and sometimes even large stones. When these tempests are at their height the sea seethes and boils." Soleyman imagined it to be infested by a sort of monster who preyed upon human beings; this is thought to have been a kind of dog-fish.

Arrived at Nicobar, Soleyman traded with the inhabitants, bartering some iron for cocoa-nuts, sugar-cane, bananas, etc.; he then crossed the sea, and seems to have made for Singapore, and northwards by the Gulf of Siam. Soleyman put into a harbor, near Cape Varella, to revictual his ships, and thence he went by the China Sea to Jehan-fou the port of the present town of Tche-Kiang. The remainder of the account of Soleyman's travels, written by

Abou-Zeyd-Hassan, contains a detailed account of the manners and customs of the Indians and Chinese; but it is not the traveler himself who is speaking, and we shall find the same subjects spoken of in a more interesting manner by later authors.

We must add, in reviewing the discoveries made by travelers sixteen centuries before, and nine centuries after, the Christian era, that from Norway to the extreme boundaries of China, taking a line through the Atlantic Ocean, the Mediterranean Sea, the Red Sea, the Indian Ocean, and the Sea of China, the immense extent of coast bordering these seas had been in a great measure visited. Some explorations had been attempted in the interior of these countries; for instance, in Egypt as far as Ethiopia, in Asia Minor to the Caucasus, in India and China; and if these old travelers may not have quite understood mathematical precision, as to some of the points they visited, at all events the manners and customs of the inhabitants, the productions of the different countries, the mode of trading with them, and their religious customs, were quite sufficiently understood. Ships could sail with more safety when the change of winds was no longer a subject of mere speculation, the caravans could take a more direct route in the interior of the countries, and the great increase of trade which took place in the middle ages is surely owing to the facilities afforded by the writings of travelers.

CHAPTER III

CELEBRATED TRAVELERS BETWEEN THE TENTH AND THIRTEENTH CENTURIES

BENJAMIN OF TUDELA, 1159-1173; PLAN DE CARPIN, OR CARPINI, 1245-1247; RUBRUQUIS, 1253-1254

IN the course of the tenth, and at the beginning of the eleventh century, a considerable amount of ardor for exploration had arisen in Northern Europe. Some Norwegians and adventurous Gauls had penetrated to the Northern seas, and, if we may trust to some accounts, they had gone as far as the White Sea and visited the country of the

Samoyedes. Some documents say that Prince Madoc explored the American continent.

At all events we may be tolerably certain that Iceland was discovered about A. D. 861 by some Scandinavian adventurers, and that it was soon after colonized by Normans. About this same time a Norwegian had taken refuge on a newly discovered land, and surprised by its verdure he gave it the name of Greenland.

The communication with this portion of the American continent was difficult and uncertain, and one geographer says "it took five years for a vessel to go from Norway to Greenland, and to return from Greenland to Norway." Sometimes in severe winters the Northern Ocean was completely frozen over, and a certain Hollur-Geit, guided by a goat, was able to cross on foot from Norway to Greenland. We should keep in mind that the period of which we are speaking is the time when legends and traditions were very plentiful, and gained ready credence.

Let us return to well-authenticated facts, and relate the journey of a Spanish Jew, whose truthfulness is beyond question.

This Jew was the son of a rabbi of Tudela, a town in Navarre, and he was called Benjamin of Tudela. It seems probable that the object of his voyage was to make a census of his brother Jews scattered over the surface of the globe, but whatever may have been his motive, he spent thirteen years, from 1160-1173, exploring nearly all the known world, and his narrative was considered the great authority on this subject up to the sixteenth century.

Benjamin of Tudela left Barcelona, and traveling by Tarragona, Gironde, Narbonne, Béziers, Montpellier, Sunel, Pousquiers, St. Gilles, and Arles, reached Marseilles. Here he visited the two synagogues in the town and the principal Jews, and then set sail for Genoa, arriving there in four days. The Genoese were masters of the sea at that time, and were at war with the people of Pisa, a brave people, who, like the Genoese, says the traveler, "owned neither kings nor princes, but only the judges whom they appointed at their own pleasure."

After visiting Lucca, Benjamin of Tudela went to Rome. Alexander III. was Pope at that time, and according to this traveler, he included some Jews among his ministers.

Among the monuments of special interest in the eternal city, he mentions St. Peter's and St. John Lateran, but his descriptions are not interesting. From Rome by Capua, and Pozzuoli, then partly inundated, he went to Naples, where he seems to have seen nothing but the five hundred Jews living there; then by Salerno, Amalfi, Benevento, Ascoli, Trani, St. Nicholas of Bari, and Brindisi, he arrived at Otranto, having crossed Italy and yet found nothing interesting to relate of this splendid country.

The list of the places Benjamin of Tudela visited, is not interesting. From Otranto to Zeitun, his halting-places were Corfu, the Gulf of Arta, Achelous, an ancient town in Ætolia, Anatolia in Greece, on the Gulf of Patras, Patras, Lepanto, Crissa, at the foot of Mount Parnassus, Corinth, Thebes, whose two thousand Jewish inhabitants were the best makers of silk and purple in Greece, Negropont and Zeitoun. Here, according to the Spanish traveler, is the boundary-line of Wallachia; he says the Wallachians are as nimble as goats, and come down from the mountains to pillage the neighboring Greek towns.

Benjamin of Tudela went on to Constantinople by way of Gardiki, a small township on the Gulf of Volo. He gives us some details of Constantinople; the Emperor Emmanuel Commenus was reigning at that time and lived in a palace that he had built upon the sea-shore, containing columns of pure gold and silver, and "the golden throne studded with precious stones, above which a golden crown is suspended by a chain of the same precious metal, which rests upon the monarch's head as he sits upon the throne." In this crown are many precious stones, and one of priceless worth; "so brilliant are they," says this traveler, "that at night, there is no occasion for any further light than that thrown back by these jewels." He adds that there is a large population in the city, and for the number of merchants from all countries who assemble there, it can only be compared to Baghdad. The inhabitants are principally dressed in embroidered silk robes enriched with golden fringes, and to see them thus attired and mounted upon their horses, one would take them for princes, but they are not brave warriors, and they keep mercenaries from all nations to fight for them. One regret he expresses, and that is, that there are no Jews left in the city,

and that they have all been transported to Galata, near the entrance of the port, where are nearly two thousand five hundred of the sects (Rabbinites and Caraites), and among them many rich merchants and silk manufacturers, but the Turks have a bitter hatred for them, and treat them with great severity. Only one of these rich Jews was allowed to ride on horseback; he was the Emperor's physician, Solomon, the Egyptian. As to the remarkable buildings of Constantinople, he mentions the Mosque of St. Sophia, in which the number of altars answers to the number of days in a year, and the columns and gold and silver candlesticks, are too numerous to be counted; also the Hippodrome, which was then the scene of combats between "lions, bears, tigers, other wild beasts, and even birds."

When Benjamin of Tudela left Constantinople he traveled to Jerusalem. In the holy city, it was but natural that the Jew could see nothing that would have interested a Christian visitor. For him, Jerusalem appeared only a small town, defended by three walls and peopled with Jews, Syrians, Greeks, Georgians, and Franks of all languages and nations. He found four hundred horse-soldiers in the city ready for war at any moment, a great temple in which is the tomb of "that man," as the Talmud styles our Saviour, and a house in which the Jews had the privilege of carrying on the work of dyeing; but they were few in number, scarcely two hundred, and they lived under the tower of David at one corner of the city. Outside Jerusalem, the traveler mentions the tomb of Absalom, the sepulcher of Osias, the pool of Siloam, near the brook Kedron, the valley of Jehoshaphat, and the Mount of Olives, from whose summit one can see the Dead Sea. Two leagues from it stands the pillar of Lot's wife, and the traveler adds, "that though the flocks and herds which pass this pillar of salt are continually licking it, yet it never diminishes in size." From Jerusalem, Benjamin of Tudela went to Bethlehem, and inscribed his name on Rachel's tomb, as it was customary for all Jews to do who passed by it.

The following is his description of Damascus: "It is a very large and beautiful city, walled round, and outside the walls for fifteen miles are gardens and orchards, and of all the surrounding country, this is the most fertile spot.

The town stands at the foot of Mount Hermon, whence rise the two rivers, Abana and Pharpar; the first passes through the city, and its waters are taken into the larger houses by means of aqueducts, as well as through the streets and markets. This town trades with all the world. The river Pharpar fertilizes the orchards and gardens outside the town. There is an Ishmaelitish mosque, called Goman-Dammesec, meaning the synagogue of Damascus, and this building has not its equal; it is said to have been Benhadad's palace, and it contains a glass wall, built apparently by magic. This wall has 365 holes in it, answering to the days of the year; and each day the sun shines through one or other of these holes in such a way that the hour of the day may be known. Inside the palace or mosque are gold and silver houses, large enough to hold two or three persons at a time, if they wish to wash or bathe in them."

After going to Galad and Salkah, which are two days' journey from Damascus, Benjamin reached Baalbec, the Heliopolis of the Greeks and Romans, built by Solomon, in the valley of the Libanus, then to Tadmor, which is Palmyra, also built entirely of great stones. Then passing by Cariatin, he stopped at Hamah, which was partially destroyed by an earthquake in 1157, which overthrew many of the Syrian towns.

Now comes in the narrative a list of names, which are of no great interest: we may mention among them, Nineveh, whence the traveler returned towards the Euphrates; and finally that he reached Baghdad, the residence of the Caliph.

Baghdad was of great interest to the Jewish traveler; he says it is a large town three miles in circumference, containing a hospital both for Jews and sick people of any nation. It is the center for learned men, philosophers, and magicians from all parts of the world. It is the residence of the Caliph, who at this time was probably Mostaidjed, whose dominion included western Persia and the banks of the Tigris. He had a vast palace, standing in a park watered by a tributary of the Tigris and filled with wild beasts; he may be taken as a model sovereign on some points; he was a good and very truthful man, kind and considerate to all with whom he came in contact. He lived on the produce

of his own toil, and made blankets, which, marked with his own seal, were sold in the market by the princes of his court, to defray the expense of his living. He only left his palace once a year, at the feast of Ramadan, when he went to the mosque near the Bassorah gate, and there acting as Iman, he explained the law to his people. He returned to his palace by a different route which was carefully guarded all the rest of the year, so that no other passer-by might profane the marks of his footsteps. All the brothers of the Caliph dwelt in the same palace as he; they were all treated with much respect, and had the government of provinces and towns in their hands, the revenues enabling them to pass a pleasant life; only, as they had once rebelled against their sovereign, they were all fettered with chains of iron, and had guards mounted before their apartments.

Benjamin of Tudela visited that part of Turkey in Asia which is watered by the Euphrates and Tigris, and saw the ruined city of Babylon, passing by what is said to be the furnace into which Shadrach, Meshach, and Abednego were thrown, and the tower of Babel, which he describes as follows: "The tower built by the tribes that were dispersed is of bricks; its largest ground work must be two miles in circumference; its length is two hundred and forty cubits. At every ten cubits there is a passage leading to a spiral staircase, which goes to the upper part of the building; from the tower there is a view of the surrounding country for twenty miles; but the wrath of God fell upon it and it is now only a heap of ruins."

From Babel the traveler went to the Synagogue of Ezekiel, situated on the Euphrates, a real sanctuary where believers congregate to read the book written by the prophet. Then traversing Alkotzonath, &c., to Sura, once the site of a celebrated Jewish college, and Shafjathib, whose synagogue is built with stones from Jerusalem, and crossing the desert of Yemen he passed Themar, Tilimar, and Chaibar which contained a great number of Jewish inhabitants, to Waseth; and thence to Bassorah on the Tigris, nearly at the end of the Persian Gulf.

He entered Persia and sojourned at Chuzestan, a large town, partly in ruins, which the river Tigris divided into two parts, one rich, the other poor, joined by a bridge, over

which hung the coffin of Daniel the prophet. He went to Amaria, which is the boundary of Media, where he says the impostor David-el-roi appeared, the worker of false miracles, who is none other than our Lord Jesus Christ, but called among the Jews of that part by the former name. Then he went to Hamadan, where the tombs of Mordecai and Esther are found, and by Dabrestan he reached Ispahan, the capital of the kingdom, a city measuring twelve miles in circumference. At this point the narrative of the traveler becomes somewhat obscure; according to his notes we find him at Shiraz, then at Samarcand, then at the foot of the mountains in Thibet. This seems to have been his farthest point towards the northeast; he must have come back to Nizapur and Chuzestan on the banks of the Tigris; thence after a sea voyage of two days, to El-Cachif, an Arabian town on the Persian Gulf, where the pearl fishery is carried on. Then, after another voyage of seven days and crossing the Sea of Oman, he seems to have reached Quilon on the coast of Malabar.

He was at last in India, the kingdom of the worshipers of the sun and of the descendants of Cush. Twenty days after leaving Quilon he was among the fire-worshipers in Ceylon, and thence, perhaps, he went to China. He thought this voyage a very perilous one, and says that many vessels are lost on it, giving the following singular expedient for averting the danger: "You should take on board with you several skins of oxen, and, if the wind rises and threatens the vessel with danger, all who wish to escape envelop themselves each in a skin, sew up this skin so as to make it as far as possible water-tight, then throw themselves into the sea, and flocks of great eagles called griffins, thinking that they are really oxen, will descend and bear them on their wings to some mountain or valley, there to devour their prey. Immediately on reaching land the man will kill the eagle with his knife, and leaving the skin, will walk towards the nearest habitation; "many people," he adds, "have been saved by this means."

We find Benjamin of Tudela again at Ceylon, then at the Island of Socotra in the Persian Gulf, and after crossing the Red Sea he arrives in Abyssinia, which he styles "the India that is on terra firma." Thence he goes down the Nile, crosses the country of Assouan, reaches the town of

Holvan, and by the Sahara, where the sand swallows up whole caravans, he goes to Zairlah, Kous, Faiouna and Misraim or Cairo.

From Damietta, the traveler visited several neighboring towns, then returning there he embarked on board a vessel and twenty days afterwards landed at Messina. He wished to continue the census that he was making, so by way of Rome and Lucca he went to St. Bernard. He mentions visiting several towns both in Germany and France, where Jews had settled, and according to Chateaubriand's account, Benjamin of Tuleda's computation brought the number of Jews to about 768,165.

In conclusion the traveler speaks of Paris, which he seems to have visited; he says, "This great town numbers among its inhabitants some remarkably learned men, who are unequaled for learning by any in the world; they spend all their time studying law, and at the same time are very hospitable to all strangers, but especially to all their Jewish brethren." Such is the account of Benjamin of Tudela's travels; they form an important part of the geographical science of the middle of the twelfth century.

Next in order of succession we come to the name of Jean du Plan de Carpin, or as some authors render it simply Carpini. He was a Franciscan or Gray Friar, born in 1182, at Perugia in Italy. It is well known what inroads the Mongolians had made under Gengis-Khan, and in 1206 this chieftain had made Karakorum, an ancient Turkish town, his capital. This town was a little north of China. His successor Ojadaï, extended the Mongolian dominion into the center of China, and, after raising an army of 600,000 men, he even invaded Europe.

Pope Innocent IV. sent an ambassador to the Tartars, but he was treated with arrogance; at the same time he sent other ambassadors to the Tartars living in Northeastern Tartary, in the hope of stopping the Mongolian invasion, and as chief in this mission the Franciscan Carpini was chosen, being known to be a clever and intelligent diplomatist. Carpini was accompanied by Stephen, a Bohemian; they set out on the 6th of April, 1245, and went first to Bohemia, where the king gave them letters to some relations living in Poland, who he hoped might facilitate their entrance into Russia. Carpini had no difficulty in reaching the terri-

tory of the Archduke of Russia, and by his advice they bought beaver and other furs as presents for the Tartar chiefs. Thus provided, they took a northeasterly route to Kiev, then the chief town of Russia, and now the seat of Government of that part, but they traveled in fear of the Lithuanians, who scoured the country at that time.

The Governor of Kiev advised the Pope's envoys to exchange their own for Tartar horses, who were accustomed to seek for their food under the snow, and thus mounted they had no difficulty in getting as far as Danilisha. There they both were attacked by severe illness; when nearly recovered they bought a carriage, and in spite of the intense cold set out again. Arrived at Kaniev, on the Dnieper, they found themselves in the frontier town of the Mongol empire, and hence they were conducted to the Tartar camp by one of the chiefs, whom they had made their friend by gifts. In the camp they were badly received at first, but being directed to the Duke of Corrensa, who commanded an army of 60,000 men forming the advanced guard, this general sent them with an escort of three Tartars to Prince Bathy, the next in command to the Emperor himself. Relays of horses were prepared for them on the road, they traveled night and day, and thus passed through the Comans' country lying between the Dnieper, the Tanais, the Volga, and the Yaik, frequently having to cross the frozen rivers, and finally reaching the court of Prince Bathy on the frontiers of the Comans' country. "As we were being conducted to the prince," says Carpini, "we were told that we should have to pass between two fires, in order to purify us from any infection that we might carry, and also to do away with any evil designs we might have towards the prince, which we agreed to do that we might be freed from all suspicion."

The prince was seated on his throne in the midst of his courtiers and officers in a magnificent tent made of fine linen. He had the reputation of being a just and kind ruler of his people, but very cruel in war. Carpini and Stephen were placed on the left of the throne, and the papal letters, translated into a language composed of Tartar and Arabic, were presented to the prince. He read them attentively and then dismissed the envoys to their tents, where their only refreshment was a little porringer full of millet.

This interview took place on Good Friday, and the next day Bathy sent for the envoys, and told them they must go to the Emperor. They set out on Easter Day with two guides; but having lived upon nothing but millet, water, and salt, the travelers were but little fit for a journey; nevertheless their guides obliged them to travel very quickly, changing horses five or six times in a day. They passed through almost a desert country, the Tartars having driven away nearly all the inhabitants. They came next to the country of the Kangites to the east of Comania, where there was a great deficiency of water; in this province the people were mostly herdsmen, under the hard yoke of the Mongolians.

Carpini was traveling from Easter till Ascension Day through the land of the Kangites, and thence he came into the Biserium country, or what we call Turkestan in the present day; on all sides the eye rested on towns and villages in ruins. After crossing a chain of mountains the envoys entered Kara-Kâty on the 1st of July; here the governor received them very hospitably, and made his sons and the principal officers of his court dance before them for their amusement.

On leaving Kara-Kâty the envoys rode for some days along the banks of a lake lying to the north of the town of Zeman, which must be, according to M. de Rémusat, the Lake Balkash. There lived Ordu, the eldest of the Tartar captains, and here Carpini and Stephen took a day's rest before encountering the cold and mountainous country of the Maimans, a nomadic people living in tents. After some days the travelers reached the country of the Mongols, and on the 22d of July arrived at the place where the Emperor was, or rather he who was to be Emperor, the election having not yet taken place.

This future Emperor was named Cunius; he received the envoys in a most friendly manner, a letter from Prince Bathy having explained to him the object of their visit; not being yet Emperor he could not entertain them nor take any part in public affairs, but from the time of Ojadaï's death, his widow, the mother of Prince Cunius, had been Regent; she received the travelers in a purple and white tent capable of holding 2,000 persons. Carpini gives the following account of the interview: " When we arrived we saw a large

assembly of dukes and princes who had come from all parts with their attendants, who were on horseback in the neighboring fields and on the hills. The first day they were all dressed in white and purple, on the second when Cunius appeared in the tent, in red, on the third day they wore violet, and on the fourth, scarlet, or crimson. Outside the tent, in the surrounding palisade were two great gates, by one of which the Emperor alone might enter; it was unguarded, but none dared to enter or leave by it; while the other, which was the general entrance, was guarded by soldiers with swords, and bows and arrows; if anyone approached within the prescribed limits he was beaten, or else shot to death with arrows. We noticed several horsemen there, on whose harness cannot have been less than twenty marks' worth of silver."

A whole month passed away before Cunius was proclaimed Emperor, and the envoys were obliged to wait patiently for this before they could be received by him. Carpini turned this leisure time to account by studying the habits of the people; he has given much interesting information on the subject in his account of his travels.

The country seemed to him to be principally very hilly and the soil sandy, with but little vegetation. There is scarce any wood; but all classes are content with dung for fuel. Though the country is so bare, sheep seem to do well. The climate is very changeable; in summer, storms are very frequent, many fall victims to the vivid lightning, and the wind is often so strong as even to blow over men on horseback; during the winter there is no rain, which all falls in the summer, and then scarcely enough to lay the dust, while the storms of hail are terrible; during Carpini's residence in the country they were so severe that once 140 persons were drowned by the melting of the enormous mass of hail-stones that had fallen. It is a very extensive country, but miserable beyond expression.

Carpini, who seems to have been a man of great discernment, took a very just idea of the Tartars themselves. He says: "Their eyes are set very far apart; they have very high cheek-bones; their noses are small and flat; their eyes small, and their eye-lashes and eyebrows seem to meet; they are of middle height with slender waists; they have small beards, some wear mustaches, and what are now called im-

perials. On the top of the head the hair is shaved off like monks, and to the width of three fingers between their ears they also shave off the hair, letting what is between the tonsure and the back of the head grow to some length; in fact it is as long as a woman's in many cases, and plaited and tied in two tails behind the ear. They have small feet; there is but little difference perceptible in the dress of the men and women, all alike wearing long robes trimmed with fur, and high buckram caps enlarged towards the upper part. Their houses are built like tents of rods and stakes, so that they can be easily taken down and packed on the beasts of burden. Other large dwellings are sometimes carried whole as they stand, on carts, and thus follow their owner about the country.

"The Tartars believe in God as the Creator of the universe and as the Rewarder and Avenger of all, but they also worship the sun, moon, fire, earth, and water, and idols made in felt, like human beings. They have little toleration, and put Michel of Turnigoo and Féodor to death for not worshiping the sun at midday at the command of Prince Bathy. They are a superstitious people, believing in enchantment and sorcery, and looking upon fire as the purifier of all things. When one of their chiefs dies he is buried with a horse saddled and bridled, a table, a dish of meat, a cup of mare's milk, and a mare and foal.

"The Tartars are most obedient to their chiefs, and are truthful and not quarrelsome; murders and deeds of violence are rare; there is very little robbery, and articles of value are never guarded. They bear great fatigue and hunger without complaint, as well as heat and cold, singing and dancing under the most adverse circumstances. They are much prone to drink to excess; they are very proud and disdainful to strangers, and have no respect for the lives of human beings."

Carpini completes his sketch of the Tartar character by adding that they eat all kinds of animals—dogs, wolves, foxes, horses, and even sometimes their fellow-creatures. Their principal beverage is the milk of the mare, sheep, goat, cow, and camel. They have neither wine, cervisia, (a beverage composed of grain and herbs), nor mead, but only intoxicating liquors. They are very dirty in their habits, scarcely ever washing their porringers, or only do-

ing so in their broth; they hardly ever wash their clothes, more especially "when there is thunder about"; and they eat rats, mice, etc., if they are badly off for other food. The men are not brought up to any manual labor, their whole occupation consisting in hunting, shooting with bow and arrows, watching the flocks, and riding. The women and girls are very athletic and very brave, they prepare furs and make clothes, drive carts and camels, and as polygamy is practiced among them, and a man *buys* as many wives as he can keep, there are enough women for all these employments.

Such is the résumé of Carpini's observations made during his residence at Syra-Orda while he was awaiting the Emperor's election. Soon he found that the election was about to take place; he noticed that the courtiers always sang before Cunius when he came out of his tent, and bowed down before him with beautiful little wands in their hands, having small pieces of scarlet wool attached to them. On a plain about four leagues from Syra-Orda, beside a stream, a tent was prepared for the Coronation, carpeted with scarlet, and supported on columns covered with gold. On St. Bartholomew's Day a large concourse of people assembled, each one fell on his knees as he arrived, and remained praying toward the sun; but Carpini and his companions refused to join in this idolatrous worship of the sun. Then Cunius was placed on the imperial throne, and the dukes and all the assembled multitudes having done homage to him, he was consecrated.

As soon as this ceremony was over, Carpini and Stephen were commanded to appear before the Emperor. They were first searched and then entered the imperial presence at the same time as other Ambassadors, the bearers of rich presents; the poor papal envoys had nothing to present; whether this had anything to do with the length of time they had to wait before his Imperial Majesty could attend to their affairs we do not know; but days passed slowly by, and they were nearly dying of hunger and thirst, before they received a summons to appear before the Secretary of the Emperor, and letters to the Pope were given to them, ending with these words, "we worship God, and by His help we shall destroy the whole earth from east to west."

The envoys had now nothing to wait for, and during the whole of the winter they traveled across icy deserts. About May they again arrived at the court of Prince Bathy, who gave them free passes, and they reached Kiev about the middle of June, 1247. On the 9th of October of the same year the Pope made Carpini Bishop of Antivari in Dalmatia, and this celebrated traveler died at Rome about the year 1251.

Carpini's mission was not of much use, and the Tartars remained much as they were before, a savage and ferocious tribe; but six years after his return another monk of the minor order of Franciscans, named William Rubruquis, of Belgian origin, was sent to the barbarians who lived in the country between the Volga and the Don. The object of this journey was as follows:

St. Louis was waging war against the Saracens of Syria at this time, and while he was engaging the Infidels, Erkalty, a Mongol prince, attacked them on the side nearest to Persia, and thus caused a diversion that was in favor of the King of France. The report arose that Prince Erkalty had become a Christian, and St. Louis, anxious to prove the truth of it, charged Rubruquis to go into the prince's own country and there make what observations he could upon the subject.

In the month of June, 1253, Rubruquis and his companions embarked for Constantinople. From thence they reached the mouth of the river Don on the Sea of Azov where they found a great number of Goths. On their arrival among the Tartars, their reception was at first very inhospitable, but after presenting the letters with which they were furnished, Zagathal, the governor of that province, gave them wagons, horses, and oxen for their journey.

Thus equipped they set out and were much surprised next day by meeting a moving village; that is to say, all the huts were placed on wagons and were being moved away. During the ten days that Rubruquis and his companions were passing through this part of the country they were very badly treated, and had it not been for their own store of biscuits, they must have died of starvation. After passing by the end of the Sea of Azov they went in an easterly direction and crossed a sandy desert on which neither tree nor stone was visible. This was the country of the

Comans that Carpini had traversed, but in a more northerly part. Rubruquis left the mountains inhabited by the Circassians to the south, and after a wearisome journey of two months arrived at the camp of Prince Sartach on the banks of the Volga.

This was the court of the prince, the son of Baatu-Khan; he had six wives, each of whom possessed a palace of her own, some houses, and a great number of chariots, some of them very large, being drawn by a team of twenty-two oxen harnessed in pairs.

Sartach received the envoys of the King of France very graciously, and seeing their poverty, he supplied them with all that they required. They were to be presented to the prince in their sacerdotal dress, when, bearing on a cushion a splendid Bible, the gift of the King of France, a Psalter given by the Queen, a Missal, a crucifix and a censor, they entered the royal presence, taking good care not to touch the threshold of the door, which would have been considered profanation. Once in the royal presence, they sang the "Salve Regina." After the prince and those of the princesses who were present at the ceremony had examined the books, etc., that the monks had brought with them, the envoys were allowed to retire, it being impossible for Rubruquis to form any opinion as to Sartach's being a Christian or not; but his work was not yet finished, the prince having pressed the envoys to go to his father's court. Rubruquis complied with the request, and crossing the country lying between the Volga and the Don, they arrived at their destination. There the same ceremonies had to be gone through as at the court of Prince Sartach. The monks had to prepare their books, etc., and be presented to the Khan, who was seated on a large gilded throne, but not wishing to treat with the envoys himself, he sent them to Karakorum, to the court of Mangu-Khan.

They crossed the country of the Bashkirs and visited Kenchat, Talach, passed the Axiartes and reached Equius, a town of which the position cannot be accurately ascertained in the present day; then by the land of Organum, by the Lake of Balkash, and the territory of the Uigurs, they arrived at Karakorum, the capital of the Mongolian empire, where Carpini had stopped without entering the town.

This town, says Rubruquis, was surrounded with walls of earth, and had four gates in the walls. The principal buildings it contained were two mosques and a Christian church. While in this city, the monk made many interesting observations on the surrounding people, especially upon the Tangurs, whose oxen, of a remarkable race, are no other than the Yaks, so celebrated in Thibet. In speaking of the Thibetans he notices their most extraordinary custom of eating the bodies of their fathers and mothers, in order to secure their having an honorable sepulture.

When Rubruquis and his companions reached Karakorum, they found that the great khan was not in his capital, but in one of his palaces which was situated on the further side of the mountains which rise in the northern part of the country. They followed him there, and the next day after their arrival presented themselves before him with bare feet, according to the Franciscan custom, so securing for themselves frozen toes. Rubruquis thus describes the interview: "Mangu-Khan is a man of middle height with a flat nose; he was lying on a couch clad in a robe of bright fur, which was speckled like the skin of a sea-calf." He was surrounded with falcons and other birds. Several kinds of beverages, arrack punch, fermented mare's milk, and ball, a kind of mead, were offered to the envoys; but they refused them all. The khan, less prudent than they, soon became intoxicated on these drinks, and the audience had to be ended without any result being arrived at. Rubruquis remained several days at Mangu-Khan's court; he found there a great number of German and French prisoners, mostly employed in making different kinds of arms, or in working the mines of Bocol. The prisoners were well treated by the Tartars, and did not complain of their lot. After several interviews with the great khan, Rubruquis gained permission to leave, and he returned to Karakorum.

Near this town stood a magnificent palace, belonging to the khan; it was like a large church with nave and double aisles; here the sovereign sits at the northern end on a raised platform, the gentlemen being seated on his right, and the ladies on his left hand. It is at this palace that twice every year splendid fêtes are given, when all the nobles of the country are assembled round their sovereign.

While at Karakorum, Rubruquis collected many interesting documents relating to the Chinese, their customs, literature, etc.; then leaving the capital of the Mongols, he returned by the same route as he had come, as far as Astrakhan; but there he branched to the south and went to Syria with a Turkish escort, which was rendered necessary by the presence of tribes bent on pillage. He visited Derbend, and went thence by Nakshivan, Erzeroum, Sivas, Cæsarea, and Inconium, to the port of Kertch, whence he embarked for his own country. His route was much the same as that of Carpini, but his narrative is less interesting, and the Belgian does not seem to have been gifted with the spirit of observation which characterized the Italian monk.

With Carpini and Rubruquis closes the list of celebrated travelers of the thirteenth century, but we have the brilliant career of Marco Polo now before us, whose travels extended over part of the thirteenth and fourteenth centuries.

CHAPTER IV

MARCO POLO, 1253-1324

THE Genoese and Venetian merchants could not fail to be much interested in the explorations of the brave travelers in Central Asia, India, and China, for they saw that these countries would give them new openings for disposing of their merchandise. The interests of commerce stimulated fresh explorations, and it was this motive that actuated two noble Venetians to leave their homes, and brave all the fatigue and danger of a perilous journey.

These two Venetians belonged to the family of Polo, which had come originally from Dalmatia, and, owing to successful trading, had become so opulent as to be reckoned among the patrician families of Venice. In 1260 the two brothers, Niccolo and Matteo, who lived for some years in Constantinople, where they had established a branch house, went to the Crimea, with a considerable stock of precious stones, where their eldest brother, Andrea Polo, had his place of business. Thence, taking a northeasterly direction and crossing the country of the Comas, they reached the camp of Barkaï-Khan on the Volga. This

Mongol prince received the two merchants very kindly, and bought all the jewels they offered him at double their value.

Niccolo and Matteo remained a year in the Mongolian camp, but a war breaking out at this time between Barkaï, and Houlagou, the conqueror of Persia, the two brothers, not wishing to be in the midst of a country where war was being waged, went to Bokhara, and there they remained three years. But when Barkaï was vanquished and his capital taken, the partisans of Houlagou induced the two Venetians to follow them to the residence of the grand Khan of Tartary, who was sure to give them a hearty welcome. This Kublaï-Khan, the fourth son of Gengis-Khan, was Emperor of China, and was then at his summer-palace in Mongolia, on the frontier of the Chinese empire.

The Venetian merchants set out, and were a whole year crossing the immense extent of country lying between Bokhara and the northern limits of China. Kublaï-Khan was much pleased to receive these strangers from the distant West. He fêted them, and asked, with much eagerness, for any information that they could give him of what was happening in Europe, requiring details of the government of the various kings and emperors, and their methods of making war; and he then conversed at some length about the Pope and the state of the Latin Church. Matteo and Niccolo fortunately spoke the Tartar language fluently, so they could freely answer all the emperor's questions.

It had occurred to Kublaï-Khan to send messengers to the Pope; and he seized the opportunity to beg the two brothers to act as his ambassadors to his Holiness. The merchants thankfully accepted his proposal, for they foresaw that this new character would be very advantageous to them. The emperor had some charters drawn up in the Turkish language, asking the Pope to send a hundred learned men to convert his people to Christianity; then he appointed one of his barons named Cogatal to accompany them, and he charged them to bring him some oil from the sacred lamp, which is perpetually burning before the tomb of Christ at Jerusalem.

The two brothers took leave of the Khan, having been furnished with passports by him, which put both men and horses at their disposal throughout the empire, and in 1266

they set out on their journey. Soon the baron Cogatal fell ill, and the Venetians were obliged to leave him and continue their journey; but in spite of all the aid that had been given to them, they were three years in reaching the port of Laïas, in Armenia, now known by the name of Issus. Leaving this port, they arrived at Acre in 1269, where they heard of the death of Pope Clement IV., to whom they were sent, but the legate Theobald lived in Acre and received the Venetians; learning what was the object of their mission he begged them to wait for the election of the new Pope.

The brothers had been absent from their country for fifteen years, so they resolved to return to Venice, and at Negropont they embarked on board a vessel that was going direct to their native town.

On landing there, Niccolo was met by news of the death of his wife, and of the birth of his son, who had been born shortly after his departure in 1254; this son was the celebrated Marco Polo. The two brothers waited at Venice for the election of the Pope, but at the end of two years, as it had not taken place, they thought they could no longer defer their return to the Emperor of the Mongols; accordingly they started for Acre, taking Marco Polo with them, who could not then have been more than seventeen. At Acre they had an interview with the legate Theobald, who authorized them to go to Jerusalem and there to procure some of the sacred oil. This mission accomplished, the Venetians returned to Acre and asked the legate to give them letters to Kublaï-Khan, mentioning the death of Pope Clement IV.; he complied with their request, and they returned to Laïas or Issus. There, to their great joy, they learnt that the legate Theobald had just been made Pope with the title of Gregory X., on the 1st of September, 1271. The newly-elected Pope sent at once for the Venetian envoys, and the King of Armenia placed a galley at their disposal to expedite their return to Acre. The Pope received them with much affection, and gave them letters to the Emperor of China; he added two preaching friars, Nicholas of Vicenza and William of Tripoli, to their party, and gave them his blessing on their departure. They went back to Laïas, but had scarcely arrived before they were made prisoners by the soldiers of the Mameluke Sultan Bibars, who was then ravaging Armenia. The two preaching

friars were so discouraged at this outset of the expedition that they gave up all idea of going to China, and left the two Venetians and Marco Polo to prosecute the journey together as best they could.

Here begins what may properly be called Marco Polo's travels. It is a question if he really visited all the places that he describes, and it seems probable that he did not; in fact, in the narrative written at his dictation by Rusticien of Pisa it is stated "Marco Polo, a wise and noble citizen of Venice, saw nearly all herein described with his own eyes, and what he did not see he learnt from the lips of truthful and credible witnesses;" but we must add that the greater part of the kingdoms and towns spoken of by Marco Polo he certainly did visit. His travels are too well known to need repetition here.

CHAPTER V

IBN BATUTA, 1328-1353

FOLLOWING in the steps of Marco Polo, a Franciscan monk traversed the whole of Asia, from the Black Sea to the extreme limits of China, passing by Trebizond, Mount Babel, Ararat, and the island of Java; but he was so credulous of all that was told him, and his narrative is so confused, that but little reliance can be placed upon it. It is the same with the fabulous travels of Jean de Mandeville. Cooley says of them, "They are so utterly untrue, that they have not their parallel in any language."

But we find a worthy successor to the Venetian traveler in an Arabian theologian, named Abdallah El Lawati, better known by the name of Ibn Batuta. He did for Egypt, Arabia, Anatolia, Tartary, India, China, Bengal, and Soudan, what Marco Polo had done for Central Asia, and he is worthy to be placed in the foremost rank as a brave traveler and bold explorer. In the year 1324, the 725th year of the Hegira, he resolved to make a pilgrimage to Mecca, and starting from Tangier, his native town, he went first to Alexandria, and thence to Cairo. During his stay in Egypt he turned his attention to the Nile, and especially to the Delta; then he tried to sail up the river, but being stopped by disturbances on the Nubian frontier, he was

obliged to return to the mouth of the river, and then set sail for Asia Minor.

After visiting Gaza, the tombs of Abraham, Isaac, and Jacob, Tyre, then strongly fortified and unassailable on three sides, and Tiberias, which was in ruins, and whose celebrated baths were completely destroyed, Ibn Batuta was attracted by the wonders of Lebanon, the center for all the hermits of that day, who had judiciously chosen one of the most lovely spots in the whole world wherein to end their days. Then passing Baalbec, and going on to Damascus, he found the city (in the year 1345) decimated by the plague. This fearful scourge devoured "24,000 persons daily," if we may believe his report, and Damascus would have been depopulated, had not the prayers of all the people offered up in the mosque containing the stone with the print of Moses' foot upon it, been heard and answered. On leaving Damascus, Ibn Batuta went to Mesjid, where he visited the tomb of Ali, which attracts a large number of paralytic pilgrims who need only to spend one night in prayer beside it, to be completely cured. Batuta does not seem to doubt the authenticity of this miracle, well known in the East under the title of "the Night of Cure."

From Mesjid, the traveler went to Bussorah, and entered the kingdom of Ispahan, and then the province of Shiraz, where he wished to converse with the celebrated worker of miracles, Magd Oddin. From Shiraz he went to Baghdad, to Tabriz, then to Medina, where he prayed beside the tomb of the Prophet, and finally to Mecca, where he remained three years. It is well known that from Mecca, caravans are continually starting for the surrounding country, and it was in company with some of these bold merchants that Ibn Batuta was able to visit the towns of Yemen. He went as far as Aden, at the mouth of the Red Sea, and embarked for Zaila, one of the Abyssinian ports. He was now once more on African ground, and advanced into the country of the Berbers, that he might study the manners and customs of those dirty and repulsive tribes; he found their diet consisted wholly of fish and camels' flesh. But in the town of Makdasbu, there was an attempt at comfort and civilization, presenting a most agreeable contrast with the surrounding squalor. The inhabitants were very fat, each of them, to use Ibn's own expression, "eating enough to feed

a convent"; they were very fond of delicacies, such as plantains boiled in milk, preserved citrons, pods of fresh pepper, and green ginger.

After seeing all he wished of the country of the Berbers, chiefly on the coast, he resolved to go to Zanguebar, and then, crossing the Red Sea and following the coast of Arabia, he came to Zafar, a town situated upon the Indian Ocean. The vegetation of this country is most luxuriant, the betel, cocoa-nut, and incense-trees forming there great forests; still the traveler pushed on, and came to Ormuz on the Persian Gulf, and passed through several provinces of Persia. We find him a second time at Mecca in the year 1332, three years after he had left it.

But this was only to be a short rest for the traveler, for now, leaving Asia for Africa, he went to Upper Egypt, a region but little known, and thence to Cairo. He next visted Syria, making a short stay at Jerusalem and Tripoli, and thence he visited the Turkomans of Anatolia, where the "confraternity of young men" gave him a most hearty welcome.

After Anatolia, the Arabian narrative speaks of Asia Minor. Ibn Batuta advanced as far as Erzeroum, where he was shown an aerolite weighing 620 pounds. Then, crossing the Black Sea, he visited the Crimea, Kaffa, and Bulgar, a town of sufficiently high latitude for the unequal length of day and night to be very marked; and at last he reached Astrakhan, at the mouth of the Volga, where the Khan of Tartary lived during the winter months.

The Princess Bailun, the wife of the khan, and daughter of the Emperor of Constantinople, was wishing to visit her father, and it was an opportunity not to be lost by Ibn Batuta for exploring Turkey in Europe; he gained permission to accompany the princess, who set out attended by 5,000 men, and followed by a portable mosque, which was set up at every place where they stayed. The princess's reception at Constantinople was very magnificent, the bells being rung with such spirit that he says, "even the horizon seemed full of the vibration."

The welcome given to the theologian by the princes of the country was worthy of his fame; he remained in the city thirty-six days, so that he was able to study it in all its details.

This was a time when communication between the different countries was both dangerous and difficult, and Ibn Batuta was considered a very bold traveler. Egypt, Arabia, Turkey in Asia, the Caucasian provinces had all in turn been explored by him. After such hard work he might well have taken rest and been satisfied with the laurels that he had gained, for he was without doubt the most celebrated traveler of the fourteenth century; but his insatiable passion for traveling remained, and the circle of his explorations was still to widen considerably.

On leaving Constantinople, Ibn Batuta went again to Astrakhan thence crossing the sandy wastes of the present Turkestan, he arrived at Khovarezen, a large populous town, then at Bokhara, half destroyed by the armies of Gengis-Khan. Some time after we hear of him at Samarcand, a religious town which greatly pleased the learned traveler, and then at Balkh which he could not reach without crossing the desert of Khorassan. This town was all in ruins and desolate, for the armies of the barbarians had been there, and Ibn Batuta could not remain in it, but wished to go westward to the frontier of Afghanistan. The mountainous country, near the Hindoo Koosh range, confronted him, but this was no barrier to him, and after great fatigue, which he bore with equal patience and good-humor, he reached the important town of Herat.

Following the course of the river Kabul and the frontiers of Afghanistan, he came to the Sindhu, the modern Indus, and descended it to its mouth. From the town of Lahore, he went to Delhi, which great and beautiful city had been deserted by its inhabitants, who had fled from the Emperor Mohammed.

This tyrant, who was occasionally both generous and magnificent, received the Arabian traveler very well, made him a judge in Delhi, and gave him a grant of land with some pecuniary advantages that were attached to the post, but these honors were not to be of any long duration, for Ibn Batuta being implicated in a pretended conspiracy, thought it best to give up his place, and make himself a fakir to escape the Emperor's displeasure. Mohammed, however, pardoned him, and made him his ambassador to China.

Fortune again smiled upon the courageous traveler, and

he had now the prospect of seeing these distant lands under exceptionally good and safe circumstances. He was charged with presents for the Emperor of China, and 2,000 horse-soldiers were given him as an escort.

But Ibn Batuta had not thought of the insurgents who occupied the surrounding countries; a skirmish took place between the escort and the Hindoos, and the traveler, being separated from his companions, was taken prisoner, robbed, garroted and carried off he knew not whither; but his courage and hopefulness did not forsake him, and he contrived to escape from the hands of these robbers. After wandering about for seven days, he was received into the house of a negro, who at length led him back to the emperor's palace at Delhi.

Mohammed fitted out another expedition, and again appointed the Arabian traveler as his ambassador. This time they passed through the enemy's country without molestation, and by way of Kanoje, Mersa, Gwalior, and Barun, they reached Malabar. Some time after, they arrived at the great port of Calicut, an important place which became afterwards the chief town of Malabar; here they were detained by contrary winds for three months, and made use of this time to study the Chinese mercantile marine which frequented this port. Ibn speaks with great admiration of these junks which are like floating gardens, where ginger and herbs are grown on deck; they are each like a separate village, and some merchants were the possessors of a great number of these junks.

At last the wind changed; Ibn Batuta chose a small junk well fitted up, to take him to China, and had all his property put on board. Thirteen other junks were to receive the presents sent by the King of Delhi to the Emperor of China, but during the night a violent storm arose, and all the vessels sank. Fortunately for Ibn he had remained on shore to attend the service at the mosque, and thus his piety saved his life, but he had lost everything except "the carpet which he used at his devotions." After this second misfortune he could not make up his mind to appear before the King of Delhi. This catastrophe was enough to weary the patience of a more long-suffering emperor than Mohammed.

Ibn soon made up his mind what to do. Leaving the

service of the emperor, and the advantages attaching to the post of ambassador, he embarked for the Maldive Islands, which were governed by a woman, and where a large trade in cocoa was carried on. Here he was again made a judge, but this was only of short duration, for the vizier became jealous of his success, and, after marrying three wives, Ibn was obliged to take refuge in flight. He hoped to reach the Coromandel coast, but contrary winds drove his vessel towards Ceylon, where he was very well received, and gained the king's permission to climb the sacred mountain of Serendid, or Adam's Peak. His object was to see the wonderful impression of a foot at the summit, which the Hindoos call "Buddha's," and the Mahometans "Adam's, foot." He pretends, in his narrative, that this impression measures eleven hands in length, a very different account from that of an historian of the ninth century, who declared it to be seventy-nine cubits long. This historian also adds that while one of the feet of our forefather rested on the mountain, the other was in the Indian ocean.

Ibn Batuta speaks also of large bearded apes, forming a considerable item in the population of the island, and said to be under a king of their own, crowned with leaves. We can give what credit we like to such fables as these, which were propagated by the credulity of the Hindoos.

From Ceylon, the traveler made his way to the Coromandel coast, but not without experiencing some severe storms. He crossed to the other side of the Indian peninsula, and again embarked.

But his vessel was seized by pirates, and Ibn Batuta arrived at Calicut almost without clothes, robbed, and worn out with fatigue. No misfortune could damp his ardor his was one of those great spirits which seem only invigorated by trouble and disasters. As soon as he was enabled by the kindness of some Delhi merchants to resume his travels, he embarked for the Maldive Islands, went on to Bengal, there set sail for Sumatra, and disembarked at one of the Nicobar Islands after a very bad passage which had lasted fifty days. Fifteen days afterwards he arrived at Sumatra, where the king gave him a hearty welcome and furnished him with means to continue his journey to China.

A junk took him in seventy-one days to the port Kailuka, capital of a country somewhat problematical, of which the

brave and handsome inhabitants excelled in making weapons. From Kailuka, Ibn passed into the Chinese provinces, and went first to the splendid town of Zaitem, probably the present Tsieun-tcheou of the Chinese, a little to the north of Nankin. He passed through various cities of this great empire, studying the customs of the people and admiring everywhere the riches, industry, and civilization that he found, but he did not get as far as the Great Wall, which he calls "The obstacle of Gog and Magog." It was while he was exploring this immense tract of country that he made a short stay in the city of Tchensi, which is composed of six fortified towns standing together. It happened that during his wanderings he was able to be present at the funeral of a khan, who was buried with four slaves, six of his favorites, and four horses.

In the meanwhile, disturbances had occurred at Zaitem, which obliged Ibn to leave this town, so he set sail for Sumatra, and then after touching at Calicut and Ormuz, he returned to Mecca in 1348, having made the tour of Persia and Syria.

But the time of rest had not yet come for this indefatigable explorer; the following year he revisited his native place Tangier, and then after traveling in the southern countries of Europe he returned to Morocco, went to Soudan and the countries watered by the Niger, crossed the Great Desert and entered Timbuctoo, thus making a journey which would have rendered illustrious a less ambitious traveler.

This was to be his last expedition. In 1353, twenty-nine years after leaving Tangier for the first time, he returned to Morocco, and settled at Fez. He has earned the reputation of being the most intrepid explorer of the fourteenth century, and well merits to be ranked next after Marco Polo, the illustrious Venetian.

CHAPTER VI

CHRISTOPHER COLUMBUS, 1436-1506

THE year 1492 is an era in geographical annals. It is the date of the discovery of America. The genius of one man was fated to complete the terrestrial globe, and to show the truth of Gagliuffi's saying:

Unus erat mundus; duo sint, ait iste; fuere.

The old world was to be entrusted with the moral and political education of the new. Was it equal to the task, with its ideas still limited, its tendencies still semi-barbarous, and its bitter religious animosities? We must leave the answer to these questions to the facts that follow.

Between the explorations of Ibn Batuta and the year 1492, what had taken place? We will give a short sketch of the geographical enterprise of the intervening years. A considerable impetus had been given to science by the Arabs (who were soon to be expelled from Spain), and had spread throughout the peninsula. Toward the end of the fourteenth century Jean de Béthencourt, a French nobleman, conquered the Canary Isles in the name of Spain; and in all the ports, but more especially in those of Portugal, there was much talk of the continent of Africa, and the rich and wonderful countries beyond the sea. "A thousand anecdotes," says Michelet, "stimulated curiosity, valor and avarice, everyone wishing to see these mysterious countries where monsters abounded and gold was scattered over the surface of the land." A young prince, Don Henry, duke of Viseu, third son of John I., who was very fond of the study of astronomy and geography, exercised a considerable influence over his contemporaries; it is to him that Portugal owes her colonial power and wealth and the expeditions so repeatedly made, which were vividly described, and their results spoken of as so wonderful, that they may have aided in awakening Columbus's love of adventure. Don Henry had an observatory built in the southern part of the province of Algarve, at Sagres, commanding a most splendid view over the sea, and seeming as though it must have been placed there to seek for some unknown land; he also established a naval college, where learned geographers traced correct maps and taught the use of the mariner's compass. The young prince surrounded himself with learned men, and especially gathered all the information he could as to the possibility of circumnavigating Africa, and thus reaching India. Though he had never taken part in any maritime expedition, his encouragement and care for seamen gave him the soubriquet of "the Navigator," by which name he is known in history. Two gentlemen belonging to Don Henry's court, Juan Gonzales Zarco, and Tristram Vaz

Teixeira, had passed Cape Nun, the terror of ancient navigators, when they were carried out to sea and passed near an island to which they gave the name of Porto-Santo. Sometime afterwards, as they were sailing towards a black point that remained on the horizon, they came to a large island covered with splendid forests; this was Madeira.

In 1433, Cape Bojador, which had for long been such a difficulty to navigators, was first doubled by the two Portuguese sailors, Gillianès and Gonzalès Baldaya, who passed more than forty leagues beyond it.

Encouraged by their example, Antonio Gonzalès, and Nuño Tristram, in 1441, sailed as far as Cape Blanco, "a feat," says Faria y Souza, "that is generally looked upon as being little short of the labors of Hercules," and they brought back with them to Lisbon some gold dust taken from the Rio del Ouro. In a second voyage Tristram noticed some of the Cape de Verd Islands, and went as far south as Sierra Leone. In the course of this expedition, he bought from some Moors off the coast of Guinea, ten negroes, whom he took back with him to Lisbon and parted with for a very high price, they having excited great curiosity. This was the origin of the slave-trade in Europe, which for the next 400 years robbed Africa of so many of her people, and was a disgrace to humanity.

In 1441, Cada Mosto doubled Cape Verd, and explored a part of the coast below it. About 1446, the Portuguese, advancing further into the open sea than their predecessors, came upon the group of the Azores. From this time all fear vanished, for the formidable line had been passed, beyond which the air was said to scorch like fire; expeditions succeeded each other without intermission, and each brought home accounts of newly-discovered regions. It seemed as if the African continent was really endless, for the further they advanced towards the south, the further the cape they sought appeared to recede. Some little time before this, King John II. had added the title of Seigneur of Guinea to his other titles, and to the discovery of Congo had been added that of some stars in the southern hemisphere hitherto unknown. Diogo Cam, in three successive voyages, went further south than any preceding navigator, and had the honor of being the discoverer of the southern point of the African continent This cape he called Cape Cross, and

here he raised a monument called a padrao or padron in memory of his discovery, which is still standing. On his way back, he visited the King of Congo in his capital, and took back with him an ambassador and numerous suite of natives, who were all baptized, and taught the elements of the Christian religion, which they were to propagate on their return to Congo.

A short time after Diogo Cam's return in the month of August, 1487, three caravels left the Tagus under the command of Bartholomew Diaz, a gentleman attached to the king's household, and an old sailor on the Guinea seas. He had an experienced mariner under him, and the smallest of the three vessels freighted with provisions, was commanded by his brother Pedro Diaz. We have no record of the earlier part of this expedition; we only know, from Joao de Barros, to whom we owe nearly all we learn of Portuguese navigation, that beyond Congo he followed the coast for some distance, and came to an anchorage that he named "Das Voltas" on account of the manner in which he had to tack to reach it, and there he left the smallest of the caravels under the care of nine sailors. After having been detained here five days by stress of weather, Diaz stood out to sea, and took a southerly course, but for thirteen days his vessels were tossed hither and thither by the tempest.

As he went further south the temperature fell and the air became very cold; at last the fury of the elements abated, and Diaz took an easterly course hoping to sight the land. After several days had passed, and being in about 42° south latitude, he anchored in the bay "dos Vaquieros," so named from the numbers of horned animals and shepherds, who fled inland at the sight of the two vessels.

At this time Diaz was about 120 miles east of the Cape of Good Hope, which he had doubled without seeing it. They then went to Sam Braz (now Mossel) bay, and coasted as far as Algoa bay and to an island called Da Cruz where they set up a padrao. But here the crews being much discouraged by the dangers they had passed through, and feeling much the scarcity and bad quality of the provisions, refused to go any farther. "Besides," they said, "as the land is now on our left, let us go back and see the Cape, which we have doubled without knowing it."

Diaz called a council, and decided that they should go

forwards in a northeasterly direction for two or three days longer. We owe it to his firmness of purpose that he was able to reach a river, seventy-five miles from Da Cruz that he called Rio Infante, but then the crew refusing to go farther, Diaz was obliged to return to Europe. Barros says: "When Diaz left the pillar that he had erected, it was with such sorrow and so much bitterness, that it seemed almost as though he were leaving an exiled son, and especially when he thought of all the dangers that he and his companions had passed through, and the long distance which they had come with only this memorial as a remembrance: it was indeed painful to break off when the task was but half completed." At last they saw the Cape of Good Hope, or as Diaz and his followers called it then, the "Cape of Torments," in remembrance of all the storms and tempests they had passed through before they could double it. With the foresight which so often accompanies genius, John II. substituted for the "Cape of Torments," the name of the "Cape of Good Hope," for he saw that now the route to India was open at last, and his vast plans for the extension of the commerce and influence of his country were about to be realized.

On the 24th of August, 1488, Diaz returned to Angra das Voltas, where he had left his smallest caravel. He found six of his nine men dead, and the seventh was so overcome with joy at seeing his companions again that he died also. No particular incident marked the voyage home; they reached Lisbon in December, 1488, after staying at Benin, where they traded, and at La Mina to receive the money gained by the commerce of the colony.

It is strange but true, that Diaz not only received no reward of any kind for this voyage which had been so successful, but he seemed to be treated rather as though he had disgraced himself, for he was not employed again for ten years. More than this the command of the expedition that was sent to double the cape which Diaz had discovered, was given to Vasco da Gama, and Diaz was only to accompany it to La Mina holding a subordinate position. He was to hear of the marvelous campaign of his successful rival in India, and to see what an effect such an event would have upon the destiny of his country.

He took part in Cabral's expedition which discovered

Brazil, but he had not the pleasure of seeing the shores to which he had been the pioneer, for the fleet had only just left the American shore, when a fearful storm arose; four vessels sank, and among them the one that Diaz commanded. It is in allusion to his sad fate that Camoens puts the following prediction into the mouth of Adamastor, the spirit of the Cape of Tempests: "I will make a terrible example of the first fleet that shall pass near these rocks, and I will wreak my vengeance on him who first comes to brave me in my dwelling."

In fact it was only in 1497, maybe five years after the discovery of America, that the southern point of Africa was passed by Vasco da Gama, and it may be affirmed that if this latter had preceded Columbus, the discovery of the new continent might have been delayed for several centuries. The navigators of this period were very timorous, and did not dare to sail out into mid-ocean; not liking to venture upon seas that were but little known, they always followed the coast-line of Africa, rather than go further from land. If the Cape of Tempests had been doubled, the sailors would have gone by this route to India, and none would have thought of going to the "Land of Spices," that is to say Asia, by venturing across the Atlantic. Who, in fact, would have thought of seeking for the east by the route to the west? But in truth this *was* the great idea of that day, for Cooley says, "The principal object of Portuguese maritime enterprise in the fifteenth century was to search for a passage to India by the Ocean." The most learned men had not gone so far as to imagine the existence of another continent to complete the equilibrium and balance of the terrestrial globe. The wonderful voyage of Columbus was thus an inspiration which revolutionized the world. His life and labors should be read in full in the books devoted to him.

CHAPTER VII

THE CONQUEST OF INDIA AND OF THE SPICE COUNTRIES

At the same time that the King of Portugal, John II., despatched Diaz to seek in the south of Africa the route to the Indies, he ordered two gentlemen of his court to find

out if it would not be possible to attain the same end by an easier, safer, and more rapid means; by way of the isthmus of Suez, the Rea Sea, and the Indian Ocean.

For carrying out such a mission there was needed a clever, enterprising man, well acquainted with the difficulties of a journey in those regions, and possessing a knowledge of the Oriental languages, or at the very least, of Arabic. This agent must be of a versatile disposition, and able to dissemble; capable, in a word, of concealing the real meaning of projects which aimed at nothing less than withdrawing all the commerce of Asia from the hands of the Mussulmans and Arabs, and through them from the Venetians, in order to enrich Portugal with it.

There was living at this time an experienced navigator, Pedro de Covilham, who had served with distinction under Alonzo V. in the war with Castile, and who had made a long stay in Africa. It was upon him that John II. cast his eye, and Alonzo de Païva was given him as a colleague. They left Lisbon in the month of May, 1487, furnished with detailed instructions, and with a chart drawn according to Bishop Calsadilla's map of the World, by the help of which the tour of Africa might be made.

The two travelers reached Alexandria and Cairo, where they were much gratified at meeting with some Moorish traders from Fez and Tlemcen, who conducted them to Tor—the ancient Eziongeber—at the foot of Sinai, where they were able to procure some valuable information upon the trade of Calicut. Covilham resolved to take advantage of this fortunate circumstance to visit a country which, for more than a century, had been regarded by Portugal with covetous longing, while Païva set out to penetrate into those regions then so vaguely designated as Ethiopia, in quest of the famous Prester John, who, according to old travelers, reigned over a marvelously rich and fertile country in Africa. Païva doubtless perished in his adventurous enterprise, being never again heard of.

As for Covilham, he traveled to Aden, whence he embarked for the Malabar coast. He visited in succession Cananore, Calicut, and Goa, and collected accurate information upon the commerce and productions of the countries bordering on the Indian Ocean, without arousing the fears of the Hindoos, who could not suspect that the kind and

friendly welcome they accorded to the traveler would bring about in the future the enthralment and ruin of their country. Covilham, not considering that he had yet done enough for his country, quitted India, and went to the eastern coast of Africa, where he visited Mozambique, Sofala—long famous for its gold mines, of which the reputation by means of the Arabs, had even reached Europe—and Zeila, the *Avalites portus* of the ancients, and the principal town of the Adel coast, upon the Gulf of Oman, at the entrance of the Arabian Sea. After a somewhat long stay in that country, he returned by Aden, then the principal entrepôt of the commerce of the east, went as far as Ormuz, at the entrance of the Persian Gulf, and then again passing up the Red Sea, he arrived at Cairo.

John II. had sent to Cairo two learned Jews to await the arrival of Covilham, and to one of these, the Rabbi Abraham Beja, the traveler gave his notes, the itinerary of his journey, and a map of Africa given to him by a Mussulman, charging Beja to carry them all to Lisbon with the least possible delay. For himself, not content with all that he had done hitherto, and wishing to execute the mission which death had prevented Païva from accomplishing, he went into Abyssinia, where the "negus" or king, known by the name of Prester John, flattered by seeing his alliance sought by one of the most powerful sovereigns of Europe, received him with the greatest kindness, and gave him a high position at his court, but to make sure of retaining his services, he constantly refused him permission to leave the country. Although he had married there and had some children, Covilham still longed for his native country, and when, in 1525, a Portuguese embassy, of which Alvarès was a member, came into Abyssinia, he witnessed the departure of his countrymen with the deepest regret, and the chaplain of the expedition has re-echoed his complaints and his grief.

M. Ferdinand Denis says, "By furnishing precise information upon the possibility of circumnavigating Africa, by indicating the route to the Indies, by giving more positive and extended ideas upon the commerce of these countries, and above all, by describing the gold mines of Sofala, and so exciting the cupidity of the Portuguese, Covilham contributed greatly to accelerate the expedition of Gama."

If one may believe an old tradition, which is unsupported

by any authentic document, Gama was descended by an illegitimate line from Alphonso III., King of Portugal. His father, Estevam Eanez da Gama, grand alcalde of Sinès and of Silvès, in the kingdom of Algarve, and commander of Seizal, occupied a high position at the court of John II. He enjoyed great reputation as a sailor, so much so, that just at the moment when his own unexpected death occurred, King John was thinking of giving Gama the command of the fleet which he was desirous of sending to the Indies. By his marriage with Dona Isabella Sodré, daughter of Juan de Resende, proveditore of the fortifications of Santarem, he had several children, and amongst them Vasco, who first reached India by doubling the Cape of Good Hope, and Paul, who accompanied him in that memorable expedition. It is known that Vasco was born at Sinès, but the date of his birth is uncertain; the year 1469 is that generally given, but besides the fact that if this be the correct date, Gama would have been very young—not more than eight and twenty—when the important command of the expedition to the Indies was confided to him, there was discovered twenty years ago, amongst the Spanish archives, a safe-conduct to Tangier granted in 1478 to two persons, Vasco da Gama and Lemos. It is scarcely probable that such a passport would have been given to a child of nine years of age, so that this discovery would appear to carry back the birth of the celebrated voyager to an earlier date.

It seems that from an early period of his life, Vasco da Gama was destined to follow the career of a sailor, in which his father had distinguished himself. The first historian of the Indies, Lopez de Castañeda, delights in recalling the fact that he had signalized himself upon the African seas. At one time he was ordered to seize all the French ships lying in the Portuguese ports, in revenge for the capture by French pirates during a time of peace of a rich Portuguese galleon returning from Mina. Such a mission would only have been confided to an active, energetic and well-tried captain, a clear proof that Gama's valor and cleverness were highly appreciated by the king.

About this time he married Dona Caterina de Ataïde, one of the highest ladies about the court, and by her he had several children, amongst others Estevam da Gama, who became governor of the Indies, and Dom Christovam, who,

says Gaucher, by his struggle with Ahmed Guerad in Abyssinia, and by his romantic death, deserves to be reckoned amongst the famous adventurers of the sixteenth century.

All doubt as to the precise date of Gama's first voyage is now at an end, thanks to the document in the public library at Oporto, a paper with which Castañeda must have been acquainted, and of which M. Ferdinand Denis has published a translation in the *Ancient and Modern Travelers* of M. E. Charton. The date may be fixed with certainty for Saturday, the 8th of July, 1497.

This expedition had been long ago determined upon, and all its details were minutely arranged. It was to be composed of four vessels of medium size, "in order," says Pacheco, "that they may enter everywhere and again issue forth rapidly." They were solidly constructed, and provided with a triple supply of sails and hawsers; all the barrels destined to contain water, oil, or wine had been strengthened with iron hoops; large provisions of all kinds had been made, such as flour, wine, vegetables, drugs, and artillery; the personnel of the expedition consisted of the best sailors, the cleverest pilots, and the most experienced captains.

Gama, who had received the title of *Capitam mor,* hoisted his flag upon the *Sam-Gabriel* of 120 tons. His brother Paulo da Gama was on board the *Sam-Raphael* of 100 tons. A caravel of 50 tons, the *Berrio,* so named in memory of the pilot Berrio, who had sold her to Emmanuel I., was commanded by an experienced sailor, Nicolo Coelho, while Pedro Nuñes was the captain of a large barque, laden with provisions and merchandise, destined for exchange with the natives of the countries which should be visited. Pero de Alemquer, who had been pilot to Bartholomew Diaz, was to regulate the course of the vessels. The crews, including ten criminals who were put on board to be employed on any dangerous service, amounted to one hundred and sixty persons. What feeble means these, what almost absurd resources, compared with the grandeur of the mission which these men were to accomplish!

The voyage was accomplished without any remarkable incidents, and on the 4th of November, anchors were dropped upon the African Coast in a bay which received the name of *Santa-Ellena.* Eight days were spent there in shipping wood, and in putting everything in order on board

the vessels. It was there that they saw for the first time the Bushmen, a miserable and degraded race of people who fed upon the flesh of sea wolves and whales, as well as upon roots. The Portuguese carried off some of these natives, and treated them with kindness. The savages knew nothing of the value of the merchandise which was offered to them, they saw the objects for the first time and were ignorant of their use. Copper was the only thing which they appeared to prize, wearing in their ears small chains of that metal. They understood well the use of the zagayes—a kind of javelin, of which the point is hardened in the fire—of which three or four of the sailors and even Gama himself had unpleasant experience, while endeavoring to rescue from their hands a certain Velloso, a man who had imprudently ventured into the interior of the country. This incident has furnished Camoens with one of the most charming episodes of the *Lusiad.*

On leaving Santa-Ellena, Pero de Alemquer, formerly pilot to Diaz, declared his belief that they were then ninety miles from the Cape, but in the uncertainty the fleet stood off to sea; on the 18th of November the Cape of Good Hope was seen, and the next day it was doubled by the fleet sailing before the wind. On the 25th the vessels were moored in the Bay of Sam-Braz, where they remained thirteen days, during which time the boat which carried the stores was demolished, and her cargo divided amongst the three other vessels. During their stay the Portuguese gave the Bushmen some hawks' bells and other objects, which, to their surprise, were accepted, for in the time of Diaz the negroes had shown themselves timid and even hostile, and had thrown stones to prevent the crews from procuring water. Now they brought oxen and sheep, and to show their pleasure at the visit of the Portuguese, "they began," says Nicolas Velho, "to play upon four or five flutes, some set high, some low, a wonderful harmony for negroes, from whom one scarcely looks for music. They danced also, as dance the blacks, and the Capitam mor commanded the trumpets to sound, and we in our boats danced too, the Capitam mor himself dancing, as soon as he had returned amongst us."

What shall we say to this little fête and this mutual serenade between the Portuguese and the negroes? Would

anyone have expected to behold Gama, a grave man, as his portraits represent him, initiating the negroes into the charms of the pavane? Unhappily these favorable dispositions were transient, and it was found necessary to have recourse to some hostile demonstrations by means of repeated discharges of artillery.

In this Bay of Sam-Braz Gama erected a padrao, which was thrown down as soon as he was gone. The fleet soon passed the Rio Infante, the furthest point reached by Diaz. Here the ships experienced the effects of a strong current, of which the violence was neutralized, thanks to a favorable wind. On the 25th of December, Christmas Day, the country of Natal was discovered.

The ships had sustained some damage, and fresh water was needed; it was therefore urgent for them to find some harbor, whch they succeeded in doing on the 10th of January, 1498. The blacks whom the Portuguese saw here upon landing were people of greater stature than those whom they had hitherto met with. Their arms were a large bow with long arrows, and a zagaye tipped with iron. They were Kaffirs, a race very superior to the Bushmen. Such happy relations were quickly established with them that Gama gave the country the name of the Land of the Good People.

A little further on, while still sailing up the coast, two Mussulman traders, one wearing a turban, the other a hood of green satin, came to visit the Portuguese, with a young man who, "from what could be understood from their signs belonged to a very distant country, and who said he had already seen ships as large as ours." Vasco da Gama took this as a proof that he was now approaching those Indian lands, which had been so long and so eagerly sought. For this reason he named the river which flowed into the sea at this place *Rio dos Bonis Signaes* (River of good tokens.) Unhappily the first symptoms of scurvy appeared at this time amongst the crews, and soon there were many sailors upon the sick list.

On the 10th of March the expedition cast anchor before the Island of Mozambique, where, as Gama learnt through his Arab interpreters, there were several merchants of Mahometan extraction, who carried on trade with India. Gold and silver, cloth and spices, pearls and rubies, formed the staple of their commerce. Gama at the same time was as-

sured that in pursuing the line of the coast, he would find numerous cities: "Whereat we were so joyful," says Velho in his naive and valuable narrative, "that we wept for pleasure, praying God to grant us health that we might see all that which we had so much desired."

The Viceroy Colyytam, who imagined he was dealing with Mussulmans, came on board several times and was magnificently entertained; he returned the civility by sending presents, and even furnished Gama with two skillful pilots, but when some Moorish merchants who had traded in Europe told him that these foreigners, far from being Turks, were in reality the worst enemies of the Mahometans, the viceroy, disgusted at his mistake, made preparations for seizing the Portuguese by treachery, and killing them. Gama was obliged to point his artillery at the town and threaten to reduce it to ashes before he could obtain the water needed for the prosecution of his voyage. Blood flowed, and Paul da Gama captured two barques, whose rich cargo was divided amongst the sailors. The ships quitted this inhospitable town on the 29th of March, and the voyage continued, a close surveillance being kept over the Arab pilots, whom Gama was obliged to cause to be flogged.

On the 4th of April the coast was seen, and on the 8th Mombasa or Mombaz was reached, a town, according to the pilots, inhabited by Christians and Mussulmans. The fleet dropped anchor outside the harbor, and did not enter it, notwithstanding the enthusiastic reception given to them. Already the Portuguese were reckoning upon meeting at mass the next day with the Christians of the island, when during the night, the flag-ship was approached by a *zavra,* having on board a hundred armed men, who endeavored to enter the ships in a body, which was refused them. The king of Mombaz was informed of all that had occurred at Mozambique, but pretending ignorance, he sent presents to Gama, proposing to him to establish a factory in his capital, and assuring him that so soon as he should have entered the port, he might take on board a cargo of spices and aromatics. The Capitam mor, suspecting nothing, immediately sent two men to announce his entry for the morrow; already they were weighing anchor when the flag-ship refusing to tack, the anchor was let fall again. In graceful and poetic fiction, Camoens affirms that it was the Nereids

led by Venus, the protectress of the Portuguese, who stayed their ships when on the point of entering the port. At this moment all the Moors on board the fleet quitted it simultaneously, whilst the Mozambique pilots threw themselves into the sea.

Two Moors who were put to the question with a drop of hot oil, confessed that the intention was to take all the Portuguese prisoners as soon as they should be inside the harbor. During the night the Moors endeavored several times to climb on board and to cut the cables in order to run the ships aground, but each time they were discovered. Under these circumstances no prolonged stay was possible at Mombaz, but it had been long enough for all those ill of scurvy to recover their health.

At the distance of four and twenty miles from land, the fleet captured a barque richly laden with gold, silver, and provisions. The next day Gama arrived at Melinda, a rich and flourishing city, whose gilded minarets, sparkling in the sunshine, and whose mosques of dazzling whiteness, stood out against a sky of the most intense blue. The reception of the Portuguese at Melinda was at first very cold, the capture of the barque the evening before being already known there, but as soon as explanations had been given, the people became cordial. The king's son came to visit the admiral, accompanied by a train of courtiers splendidly dressed, and a choir of musicians, who played upon various instruments. The greatest astonishment was shown at the artillery practice, for the invention of gunpowder was not yet known on the east coast of Africa. A solemn treaty was made, ratified by oaths upon the Gospel and the Koran, and cemented by an interchange of presents. From this moment the ill-will, the treachery, the difficulties of all kinds which had hitherto beset the expedition, ceased as if by magic: this must be attributed to the generosity of the King of Melinda, and to the aid which he furnished to the Portuguese.

Faithful to the promise which he had made to Vasco da Gama, the king sent him a Gujerat pilot named Malemo Cana, a man well instructed in navigation, understanding the use of charts, of the compass and the quadrant, who rendered the most important service to the expedition. After a stay of nine days the fleet weighed anchor for

Calicut. The coasting plan hitherto pursued was now to be abandoned, and the time was come when, in reliance upon the blessing of God, the Portuguese must venture out upon the wide ocean, without other guide than an unknown pilot furnished by a king whose kind welcome had not sufficed to lull to sleep the suspicions of the foreigners. And yet, thanks to the ability and loyalty of this pilot, thanks also to the clemency of the sea, and to the wind being constantly in its favor, the fleet, after a twenty-three days' voyage, reached the land on the 17th of May, and the next day anchored at the distance of six miles below Calicut. The enthusiasm on board was great. At last they had arrived in those rich and wonderful countries. Fatigues, dangers, sickness, all were forgotten. The object of their long labors was attained! Or rather, it seemed to be so, for there was still needed the possession of the treasures and rich productions of India.

Scarcely were the anchors dropped when four boats came off from the shore, performing evolutions around the fleet, and apparently inviting the sailors to disembark. But Gama, rendered cautious by the occurrences at Mozambique and Mombaz, sent on shore one of the criminals who were on board, to act as a scout; ordering him to walk through the town and endeavor to ascertain the temper of its inhabitants. Surrounded by an inquisitive crowd, assailed by questions to which he could not reply, this man was conducted to the house of a Moor named Mouçaïda who spoke Spanish, and to whom he gave a short account of the voyage of the fleet. Mouçaïda returned with him on board, and his first words on setting foot on the ship were "Good luck! good luck! quantities of rubies, quantities of emeralds!" Whereupon, Mouçaïda was at once engaged as interpreter.

The King of Calicut was at this time at a distance of forty-five miles from his capital, so the Capitam mor despatched two men to announce the arrival of an ambassador from the King of Portugal, being the bearer of letters to him from his sovereign. The king at once sent a pilot, with orders to take the Portuguese ships into the safer roadstead of Pandarany, and promised to return himself on the morrow to Calicut; this he did, and ordered his Intendant or Catoual to invite Gama to land and open nego-

tiations. In spite of the supplications of his brother, Paul da Gama, who represented to him the dangers which he might incur, and those to which his death would expose the expedition, the Capitam mor set out for the shore, upon which an enormous crowd of people were awaiting him.

The idea that they were in the midst of a Christian population was so rooted in the minds of all the members of the expedition, that Gama, on passing by a pagoda on the way, entered it to perform his devotions. One of his companions, however, Juan de Saa, noticing the hideous pictures upon the walls, was less credulous, and whilst throwing himself upon his knees, said aloud, "If that be a devil, I intend nevertheless to adore only the true God!" A mental reservation which caused amusement to the admiral.

Near the gates of the town the crowd was even more closely packed. Gama and his companions, under the guidance of the Catoual, had some difficulty in reaching the palace, where the king, who in the narrative is called the "Zamorin," was awaiting them with extreme impatience. Ushered into halls splendidly decorated with silken stuffs and carpets, and in which burned the most exquisite perfumes, the Portuguese found themselves in the presence of the Zamorin. He was magnificently attired, and loaded with jewels, the pearls and diamonds which he wore being of extraordinary size. The king ordered refreshments to be served to the strangers, and permitted them to be seated, a peculiar mark of favor in a country where the sovereign is usually only addressed with the most lowly prostrations. The Zamorin afterwards passed into another apartment, to hear with his own ears, as was proudly demanded by Gama, the reasons for the embassy and the desire felt by the King of Portugal to conclude a treaty of commerce and alliance with the King of Calicut. The Zamorin listened to Gama's discourse, and replied that he should be happy to consider himself the friend and brother of King Emmanuel, and that he would, by the aid of Gama, send ambassadors to Portugal.

There are certain proverbs of which the force is not affected by change of latitude, and the truth of that one which says, "The days succeed each other and have no similarity," was proved the next day at Calicut. The en-

thusiasm which had been aroused in the mind of the Zamorin by the ingenious discourse of Gama, and the hope it had awakened of the establishment of a profitable trade with Portugal, vanished at the sight of the presents which were to be given him. "Twelve pieces of striped cloth, twelve cloaks with scarlet hoods, six hats, and four branches of coral, accompanied by a box containing six large basons, a chest of sugar, and four kegs, two filled with oil, and two with honey," certainly did not constitute a very magnificent offering. At sight of it, the prime minister laughed, declaring that the poorest merchant from Mecca brought richer presents, and that the king would never accept of such ridiculous trifles. After this affront Gama again visited the Zamorin, but it was only after long waiting in the midst of a mocking crowd, that he was admitted to the presence of the king. The latter reproached him in a contemptuous manner for having nothing to offer him, while pretending to be the subject of a rich and powerful king. Gama replied with boldness, and produced the letters of Emmanuel, which were couched in flattering terms, and contained a formal promise to send merchandise to Calicut. The Zamorin, pleased at this prospect, then inquired with interest about the productions and resources of Portugal, and gave permission to Gama to disembark and sell his goods.

But this abrupt change in the humor of the Zamorin was not at all agreeable to the Moorish and Arab traders, whose dealings made the prosperity of Calicut. They could not look on quietly whilst the foreigners were endeavoring for their own advantage to turn aside the commerce which had been hitherto entirely in their hands; they resolved, therefore, to leave no stone unturned to drive away once for all these formidable rivals from the shores of India. Their first care was to gain the ear of the Catoual; then they painted in the blackest colors these insatiable adventurers, these bold robbers, whose only object was to spy out the strength and resources of the town, that they might return in force to pillage it, and to massacre those who should venture to oppose their designs.

Upon arriving at the roadstead of Pandarany, Gama found no boat to take him off to the ships, and was forced to sleep on shore. The Catoual never left him, continually

seeking to prove to him the necessity of bringing the ships nearer to the land; and when the admiral positively refused to consent to this, he declared him to be his prisoner. He had very little idea as yet of the firmness of Gama's character. Some armed boats were sent to surprise the ships, but the Portuguese, having received secret intelligence from the admiral of all that had happened, were on their guard, and their enemies dared not use open force. Gama, still a prisoner, threatened the Catoual with the anger of the Zamorin, whom he imagined could never thus have violated the duties of hospitality, but seeing that his menaces produced no effect, he tried bribery, presenting the minister with several pieces of stuff, who, thereupon at once altered his demeanor. "If the Portuguese," said he, "had but kept the promise they had made to the king, of disembarking their merchandise, the admiral would long ago have returned on board his ships." Gama at once sent an order to bring the goods to land, opened a shop for their sale, of which the superintendence was given to Diego Diaz, brother to the discoverer of the Cape of Good Hope, and was then allowed to go back to his ships.

The Mussulmen placed obstacles in the way of the sale of the merchandise by depreciating its value; Gama sent his agent Diaz to the Zamorin to complain of the perfidy of the Moors and of the bad treatment to which he had been subjected, requesting at the same time permission to move his place of sale to Calicut, where he hoped that the goods would be more easily disposed of. This request was favorably received, and friendly relations were maintained, in spite of the Moorish intrigues, until the 10th of August, 1498. On that day Diaz went to announce Gama's impending departure to the king, reminding him of his promise to send an embassy to Portugal, and asking him to allow Gama a specimen of each of the productions of the country. These were to be paid for on the first sale of goods which should take place after the departure of the fleet, it being intended that the employés of the factory should remain at Calicut during Gama's absence. The Zamorin, instigated by the Arab traders, not only refused to execute his promise, but demanded the payment of 600 *seraphins* as customs duty, ordering at the same

time the seizure of the merchandise, and making prisoners of the men employed in the factory.

Such an outrage, such contempt for the rights of nations, called for prompt vengeance, but Gama understood the art of dissimulation; however, on receiving a visit on board from some rich merchants, he detained them, and sent to the Zamorin to demand an exchange of prisoners. The king's reply not being sent within the time specified by the admiral, the latter set sail and anchored at the distance of sixteen miles from Calicut. After another fruitless attack by the Hindoos, the two agents returned on board, and a portion of the hostages whom Gama had secured were given up. Diaz brought back with him a curious letter from the Zamorin to the king of Portugal. It was written upon a palm leaf, and shall be quoted in all its strange laconicism, so different from the usual grandiloquence of the oriental style:

"Vasco da Gama, a noble of thy palace, is come into my country which I have permitted. In my kingdom there is much cinnamon, cloves, and pepper, with many precious stones, and what I desire from thy country is gold, silver, coral, and scarlet. Adieu."

On the morrow, Mouçaïda the Moor of Tunis who had served as interpreter to the Portuguese, and had been a great assistance to them in their negotiations with the Zamorin, came to seek an asylum on board the ships. The merchandise had not been brought back on the appointed day, and the Capitam mor now resolved to carry away with him the men whom he had kept as hostages, but the fleet was becalmed at several miles distance from Calicut, and was attacked by twenty armed boats, which were with difficulty kept at a distance by the artillery, until they were forced by a violent storm to take shelter under the coast.

The admiral was sailing along the coast of the Deccan, and had permitted some of the sailors to go on shore to gather fruit and collect cinnamon bark, when he perceived eight boats, which appeared to be coming towards him. Gama recalled the men, and sailed forward to meet the Hindoos, who made the greatest haste to flee from him, but not without leaving a boat laden with cocoa, and provisions, in the hands of the Portuguese. On arriving at the Laccadive Archipelago, Gama had the *Berrio* recalked,

and his own ship drawn up on shore for repairs. The sailors were busy over this work when they were again attacked, but without more success than heretofore. The next day witnessed the arrival of an individual forty years of age, dressed in Hindoo style, who began to speak to the Portuguese in excellent Italian, telling them that he was a native of Venice, and had been torn from his country while still young, that he was a Christian, but without the possibility of practicing his religion. He was in a high position at the court of the king of the country, who had sent him to them, to place at their disposal all that the country contained which could minister to their comfort. These offers of service, so different from the welcome accorded to them hitherto, excited the suspicions of the Portuguese, and they were not long in discovering that this adventurer was in command of the boats which had attacked them the day before. Upon this they had him scourged until he confessed that he had come to discover whether it were possible to attack the fleet with advantage, and he ended by affirming that all the inhabitants of the sea-shore were in league to destroy the Portuguese. He was retained on board, the work upon the ships was hurried forward, and as soon as water and provisions had been taken in, sail was made for a return to Europe.

In consequence of dead calms and contrary winds, the expedition was three months, all but three days, in reaching the African coast. During this long voyage the crews suffered terribly from scurvy, and thirty sailors perished. In each ship, only seven or eight men were in a condition to work the vessel, and very often the officers themselves were forced to lend a hand. "Whence I can affirm," says Velho, "that if the time in which we sailed across those seas had been prolonged a fortnight, nobody from hence would have navigated them after us. . . . And the captains having held a council upon the matter, it was resolved that in case of similar winds catching us again, to return towards India, there to take refuge." On the 2nd of February, 1499, the Portuguese found themselves at last abreast of a great town on the coast of Ajan, called Magadoxo, distant 300 miles from Melinda.

Gama, dreading another reception like the one given him at Mozambique, would not stop here, but while passing

within sight of the town, ordered a general discharge of the guns. A few days afterwards the rich and salubrious plains of Melinda came in sight, and here they cast anchor. The king hastèned to send off fresh provisions and oranges for the invalids on board. The reception given by him to the Portuguese was in every particular most affectionate, and the friendship which had arisen during Gama's first visit to Melinda was greatly strengthened. The Sheik of Melinda sent for the King of Portugal a horn made of ivory and a number of other presents, entreating Gama at the same time to receive a young Moor on board his ship, that through him the king might learn how earnestly he desired his friendship.

The five days' rest at Melinda was of the greatest benefit to the Portuguese; at its expiration they again set sail. Soon after passing Mombaz they were obliged to burn the *Sam-Raphael,* the crews being too much reduced to be able to work three ships. They discovered the Island of Zanzibar, anchored in the Bay of Sam-Braz, and on the 20th of February, a favorable wind enabled them to double the Cape of Good Hope, when they again found themselves upon the Atlantic Ocean. The breeze remaining favorable, helped forward the return of the mariners, and at the end of twenty-seven days, they had arrived in the neighborhood of the Island of Santiago. On the 25th of April Nicholas Coelho, captain of the *Berrio,* eager to be the first to carry to Emmanuel the news of the discovery of the Indies, separated himself from his chief, and without touching, as had been arranged, at the Cape de Verd Islands, made sail direct for Portugal, arriving there on the 10th of July.

During this time the unfortunate Gama was plunged in the most profound sorrow, for his brother, Paul da Gama, who had shared his fatigues and sufferings, and who was to be a partaker of his glory, seemed to be slowly dying. At Santiago, Vasco da Gama, now returned to well known and much frequented seas, gave up the command of his ships to Joao da Saa, and chartered a fast-sailing caravel, to hasten as much as possible his beloved invalid's return to his native country. But all hope was in vain, and the caravel only arrived at Terceira in time to inter there the body of the brave and sympathizing Paul da Gama.

Upon his arrival in Portugal, which must have taken

place during the early part of September, the admiral was received with stately festivals. Of the 160 Portuguese whom he had taken with him, fifty-five only returned with him. The loss was great certainly, but what was it compared with the great advantages to be hoped for? The public realized this, and gave the most enthusiastic reception to Gama. The King, Emmanuel II., added to his own titles that of Lord of the conquests and of the navigation of Ethiopia, Arabia, Persia, and the Indies; but he allowed two years to pass before rewarding Gama. He then bestowed upon him the title of Admiral of the Indies, and authorized him to use the prefix of *Dom* before his name, a privilege then rarely granted. Also, doubtless to make Vasco da Gama forget the tardiness with which his services had been rewarded, the king gave him 1,000 crowns, a considerable sum for that period, and also conceded to him certain privileges in connection with the commerce of the Indies, which were likely speedily to make his fortune.

On the 9th of March, 1500, a fleet of thirteen vessels left Rastello, under the command of Pedro Alvarès Cabral; on board, as a volunteer, was Luiz de Camoens, who in his poem the "Lusiad," was to render illustrious the valor and adventurous spirit of his countrymen. Cabral belonged to one of the most illustrious families in Portugal, and married Isabel de Castro, first lady in waiting to the Infanta Dona Maria, daughter of John III. If it be asked whether Cabral had made himself famous by some important maritime discovery, we answer there is no reason to think so, for in that case the historians would have recorded it. But it is difficult to believe that he owed to court favor alone the command of an expedition in which such men as Bartholomew Diaz, Nicholas Coelho the companion of Gama, and Sancho de Thovar sailed under his orders. Why had not this mission been confided to Gama, who had been at home for six months, and whose knowledge of the countries to be visited and of the manners of their inhabitants, seemed to point him out as the fittest man for the service? Had he not yet recovered from the fatigues of his first voyage? Or had his grief for the loss of a brother who had died almost within sight of the coasts of Portugal so deeply affected him, that he desired to remain in retirement? May it not rather have been that King Emmanuel

was jealous of the fame of Gama, and did not wish to give him the opportunity of increasing his renown? These are problems which perhaps history may be forever unable to solve.

It is easy to believe in the realization of those things which we ardently desire. Emmanuel imagined that the Zamorin of Calicut would not object to the establishment of Portuguese shops and factories in his country, and Cabral, the bearer of presents of such magnificence as to obliterate the memory of the shabbiness of those offered by Gama, received orders to obtain from the Zamorin an interdict, forbidding any Moor to carry on trade in his capital. The new Capitam mor was in the first place to visit Melinda, to offer rich presents to its king, and to restore to him the Moor who had come to Portugal with Gama. Sixteen friars were sent out on board the fleet, charged to carry the knowledge of the Gospel to the distant countries of Asia.

The fleet had sailed for thirteen days and had passed the Cape de Verd Islands, when it was discovered that one of the ships, under the command of Vasco d'Ataïde, was no longer in company. The rest of the ships lay to for some time to await her, but in vain, and the twelve vessels then continued their navigation upon the open sea, and not, as had been the manner hitherto, steering simply from cape to cape along the shores of Africa. Cabral hoped by this means to avoid the calms in the Gulf of Guinea, which had proved so great a cause of delay to the preceding expeditions. Perhaps even the Capitam mor, who must, in common with the rest of his countrymen, have been acquainted with the discoveries of Christopher Columbus, may have had the secret hope, by keeping to the west, of arriving at some region unvisited by the great navigator.

The fact remains, whether it is to be accounted for by a storm or by some secret design, that the fleet was out of the right way for doubling the Cape of Good Hope when, on the 22nd of April, a high mountain was seen, and soon afterwards a long stretch of coast, which received the name of Vera Cruz, changed afterwards to that of Santa Cruz. This was Brazil, and the point where now stands Porto Seguro. On the 28th, after a skillful reconnaissance of the coasts had been made by Coelho, the Portuguese sailors

landed upon the American shores, and became aware of a delicious mildness of temperature, with a luxuriance of vegetation greatly exceeding anything which they had seen on the costs of Africa or of Malabar. The natives formed themselves in groups around the sailors, without showing the least sign of fear. They were almost naked, and bore upon the wrist a tame parroquet, after the fashion in which the gentlemen of Europe carry their hawks or their gerfalcons.

On Easter Sunday, the 26th of April, a solemn mass was celebrated on the shore in sight of the Indians, whose silence and attitude of respect excited the admiration of the Portuguese. On the 1st of May a large cross and a padrao were erected on the shore, and Cabral formally took possession of the country in the name of the King of Portugal. His first care after this formality was accomplished was to despatch Gaspard de Lemos to Lisbon, to announce the dicovery of this rich and fertile country. Lemos took with him the narrative of the expedition written by Pedro Vaz de Caminha, and an important astronomical document, the work of Master Joao, in which was doubtless stated the exact situation of the new conquest. Before setting out for Asia, Cabral put on land two criminals, whom he ordered to ascertain the resources and riches of the country, as well as the manners and customs of the inhabitants. These wise and far-sighted measures speak much for Cabral's prudence and sagacity.

It was the 2nd of May when the fleet lost sight of Brazil. All on board, rejoicing over this happy commencement of the voyage, believed in the prospect of an easy and rapid success, when the appearance of a brilliant comet on eight consecutive days struck the ignorant and simple minds of the sailors with terror; they considered it must be a bad omen, and for this once events appeared to justify superstition. A fearful storm arose, waves mountains high broke over the ships, whilst the wind blew furiously and rain fell without ceasing. When the sun at length succeeded in piercing the thick curtain of clouds which almost entirely intercepted his rays, a horrible scene was disclosed. The water looked thick and black, large patches of a livid white color flecked the foaming, crested waves, while during the night phosphorescent lights, streaking the immense plain

of water, marked out the course of the ships with a train of fire. For two-and-twenty days, without truce or mercy, the Portuguese ships were battered by the furious elements. The terrified sailors were utterly prostrate; they vainly exhausted their prayers and vows, and obeyed the orders of their officers only from the force of habit; from the first day they had given up any hope of their lives being spared, and only awaited the moment when they should all be submerged. When light at length returned and the billows became calm, each crew, thinking themselves to be perhaps the sole survivors, looked eagerly over the sea in search of their companions. Three ships met together again with a joy which the sad reality soon abated. Eight vessels were missing, four had been engulfed by a gigantic water-spout during the last days of the storm. One of these had been commanded by Bartholomew Diaz, the discoverer of the Cape of Good Hope; he had been drowned by these murderous waves, the defenders, according to Camoens, of the empire of the east against the nations of the west, who had for so many centuries coveted her marvelous riches.

During this long series of storms the Cape had been doubled and the fleet was approaching the coast of Africa. On the 20th of July Mozambique was signaled. The Moors of this place showed a more agreeable disposition than they had done when Gama was there, and furnished the Portuguese with two pilots, who conducted them to Quiloa, an island famed for the trade in gold-dust which was carried on with Sofala. There Cabral found two of the missing ships, which had been driven to this island by the wind. A plot was on foot in Quiloa for a wholesale massacre of the Europeans, but this was frustrated by a prompt departure from the island, and the ships arrived at Melinda without any untoward incident. The stay of the fleet in this port was the occasion of fêtes and rejoicings without number, and soon, revictualed, repaired, and furnished with excellent pilots, the Portuguese vessels sailed for Calicut, where they arrived on the 13th of December, 1500.

This time, thanks to the power of their arms as well as to the richness of the presents offered to the Zamorin, the reception was different, and the versatile prince agreed to all the demands of Cabral; namely, a monopoly of the trade

in aromatics and spicery, and the right of seizure upon all vessels which should infringe this privilege. For some time the Moors dissembled their resentment, but when they had succeeded in thoroughly exasperating the population against the foreigners, they rushed at a given signal into the factory which was under the direction of Ayrès Correa, and massacred fifty of the Portuguese, whom they surprised in it. Vengeance for this outrage was not slow; ten boats moored in the port were taken, pillaged, and burned before the eyes of the Hindoos, who were powerless to render opposition; afterwards the town was bombarded, and was half-buried under its ruins.

When this affair was concluded, Cabral, continuing the exploration of the Malabar coast, arrived at Cochin, where the Rajah, a vassal of the Zamorin, hastened to conclude an alliance with the Portuguese, eagerly seizing this opportunity to declare himself independent. Although by this time his fleet was richly laden, Cabral made a visit to Cananore, where he entered into a treaty with the Rajah of the country; then, being impatient to return home, he set sail for Europe. While coasting along that shore of Africa, which is washed by the Indian Ocean, he discovered Sofala, a place which had escaped the observation of Gama. On the 13th of July, 1501, Cabral arrived at Lisbon, where he had the joy of finding the two remaining ships which he had imagined to be lost.

It is pleasant to believe that he received the welcome merited by the important results obtained in this memorable expedition. Although contemporary historians are silent upon the incidents of his life after his return, recent research has been rewarded by the discovery of his tomb at Santarem, and M. Ferdinand Denis has happily proved that, like Vasco da Gama, he received the title of *Dom* as a reward for his glorious deeds.

Whilst he was returning to Europe Alvarès Cabral might have encountered a fleet of four caravels under the command of Joao da Nova, which King Emmanuel had despatched to give fresh vigor to the commercial relations which Cabral had been charged to establish in the Indies. This new expedition doubled the Cape of Good Hope without misadventure, discovered between Mozambique and Quiloa an unknown island, which was named after the

commander of the fleet, and arrived at Melinda, where Da Nova was informed of the events which had taken place at Calicut. He felt that he had not forces at his disposal sufficient to justify him in going to punish the Zamorin, and not wishing to endanger the prestige of Portuguese arms by the risk of a reverse, he steered for Cochin and Cananore, of which the kings, although tributaries of the Zamorin, had entered into alliance with Alvarès Cabral. Da Nova had already taken on board 1,000 hundredweights of pepper, 50 of ginger, and 450 of cinnamon, when he received warning that a considerable fleet, coming apparently from Calicut, was advancing with hostile intentions. If he had hitherto been more concerned with trade than with war, he did not the less in these critical circumstances display a bold and courageous spirit worthy of his predecessors. He accepted the combat, notwithstanding the apparent superiority of the Hindoos, and partly by the skillful arrangements which he made, partly by the power of his guns, he managed to disperse, to take, or to sink the hostile vessels. Perhaps Da Nova ought to have profited by the terror which his victory had spread along the coast, and the temporary exhaustion of the Moorish resources, to strike a great blow by the taking of Calicut. But we are too far removed in time from the events, and know too little of their details, to appreciate with impartiality the reasons which induced the admiral to return immediately to Europe.

It was durng this latter part of his voyage that Nova discovered the small island of Saint Helena in the midst of the Atlantic. A curious story attaches to this discovery. A certain Fernando Lopez had followed Gama to the Indies; this man, wishing to marry a Hindoo, was forced for this purpose to renounce Christianity and become a Mahometan. Upon Nova's visit, having had enough either of his wife or of her religion, he begged to be taken back to his country, and returned to his old creed. Upon arriving at Saint Helena, Lopez, in obedience to a sudden idea, which he regarded as an inspiration from on high, requested to be landed there, in order, as he said, to expiate his detestable apostasy and to atone for it by his devotion to humanity. His will appeared so fixed that Da Nova was forced to consent, and he left him there, having given him at his request various seeds of fruits and vege-

tables. It must be added that this singular hermit worked for four years at the clearing and planting of the island with such success, that ships were soon able to call there to revictual during their long passage from Europe to the Cape of Good Hope.

The successive expeditions of Gama, Cabral, and Da Nova had conclusively proved that an uninterrupted commerce must not be reckoned upon, nor a continued exchange of merchandise, with the population of the Malabar Coast, who, while their own independence and liberty were respected had each time leagued together against the Portuguese. That trade with Europeans which they so persistently refused, must be forced upon them, and for that purpose permanent military establishments must be formed, capable of overawing the malcontents, and even in case of necessity of taking possession of the country. But to whom should such an important mission be entrusted? The choice could scarcely be doubtful, and Vasco da Gama was unanimously chosen to take the command of the powerful armament which was in preparation.

Vasco had ten ships under his own immediate command, while his second brother Stephen da Gama, and his cousin Vincent Sodrez, had each five ships under his orders, but they were both to recognize Vasco da Gama as their chief. The ceremonies which preceded the departure of the fleet from Lisbon were of a particularly grave and solemn character. King Emmanuel, followed by the whole court, repaired to the cathedral in the midst of an enormous crowd, and there called down blessings from heaven upon this expedition, partly religious, partly military, while the Archbishop blessed the banner which was entrusted to Gama.

The admiral's first care was to visit Sofala and Mozambique, towns of which he had had reason to complain in the course of his first voyage. Being anxious to establish harbors for refuge, and revictualing of ships, he established there merchants' offices, and laid the foundation of forts. He also levied a heavy tribute upon the Sheik of Quiloa, and then sailed for the coast of Hindostan. When Gama had arrived off Calicut, he perceived on the 3rd of October a vessel of large tonnage, which appeared to him to be richly laden. It was the *Merii* bringing back from Mecca a great number of pilgrims belonging to all the coun-

tries of Asia. Gama attacked the ship without provocation, captured her and put to death more than three hundred men who were on board. Twenty children alone were saved and taken to Lisbon, where they were baptized, and entered the army of Portugal. This frightful massacre, besides being quite in accordance with the ideas of the period, was calculated according to Gama, to strike terror into the Hindoo mind; it did nothing of the sort. This hateful and useless cruelty has left a stain of blood upon the hitherto pure fame of the admiral.

As soon as he arrived at Cananore, Gama obtained an audience of the Rajah, who authorized him to establish a counting-house, and to build a fort. At the same time a treaty of alliance, offensive and defensive, was concluded. After setting the laborers to work, and installing his agent, the admiral set sail for Calicut, where he intended to summon the Zamorin to a reckoning for his disloyalty, as well as for the murder of the Portuguese who had been surprised in the factory. Although the Rajah of Calicut had been informed of the arrival in the Indies of his formidable enemies, he had taken no military precautions, and thus, when Gama presented himself before the town, he was able to seize some vessels anchored in the port and to make a hundred prisoners, without encountering any resistance; afterwards he granted the Zamorin a respite of four days, in which to make atonement to the Portuguese for the murder of Correa, and to refund the value of the merchandise which had been stolen on that occasion.

The time specified had scarcely elapsed when the bodies of fifty of the prisoners were strung up at the yard-arms of the vessels, where they remained exposed to the view of the town during the whole day. In the evening the feet and hands of these expiatory victims were cut off and taken ashore, with a letter from the admiral, declaring that his vengeance would not be limited to this execution. Accordingly, under cover of the night, the broadsides of the vessels were brought to bear upon the town, which was bombarded for the space of three days. It will never be known what was the exact number of the slain, but it must have been considerable. Without reckoning those killed by the fire of the cannon and muskets, a great number of Hindoos were buried beneath the ruins of the build-

ings, or perished in the conflagration, which destroyed a portion of the town of Calicut. The Rajah had been one of the first to take flight, and fortunate was it for him that he had done so, for his palace was amongst the buildings which were demolished. At length, satisfied with having transformed this heretofore rich and populous city into a heap of ruins, and considering his vengeance satiated, and that the lesson so taught would be profitable, Gama set sail for Cochin, leaving behind him Vincent Sodrez, with several ships, to continue the blockade.

Triumpara, the sovereign of Cochin, informed the admiral that he had been eagerly solicited by the Zamorin to take advantage of the confidence reposed in him by the Portuguese, to surprise and seize them, in consequence of which intelligence, and to reward the integrity of the king whose loyalty had exposed him to the enmity of the Rajah of Calicut, Gama, when starting for Lisbon with a valuable cargo, left with Triumpara ships sufficient to enable him to await in safety the arrival of another squadron. During Gama's return voyage the only noteworthy incident that occurred was the defeat of another Malabar fleet. The admiral arrived in Europe on the 20th of December, 1503.

Once more the eminent services rendered by this great man went unrecognized, or rather they were not appreciated as they deserved. Gama, who had just laid the foundations of the colonial empire of Portugal in India, remained for one and twenty years without employment, and it was only through the intercession of the Duke of Braganza, that he obtained the title of Count de Vidigueyra. A too common instance this of ingratitude, but one which it is never *mal a propos* to stigmatize as it deserves.

Scarcely had Gama set out for Europe, before the Zamorin at the instigation of the Mussulmen, who saw their commercial supremacy more and more compromised, assembled his allies at Pani with the object of attacking the King of Cochin and of punishing him for the counsel and assistance which he had given to the Portuguese. The unfortunate Rajah's fidelity was now put to a hard proof. Besieged in his capital by a large force, he saw himself all at once deprived of the aid of those for whose advantage

he had incurred so great a risk. Sodrez and several of his captains had deserted the post, where both honor and gratitude required them to remain, and if need were, to die in the discharge of their duty; they forsook Triumpara to go and cruise in the neighborhood of Ormuz, and at the entrance to the Red Sea, where they calculated that the annual pilgrimage to Mecca was likely to ensure them some rich booty. The Portuguese agent vainly represented to them the unworthiness of their conduct, so they set out in haste, to escape from these inconvenient reproaches.

The King of Cochin, betrayed by some of the Nairs (military nobles) of his palace, who had been gained over by the Zamorin, soon saw his capital carried by assault, and was obliged to seek refuge upon an inaccessible rock in the little Island of Viopia, with those Portuguese who had remained faithful to him. When he was reduced to the last extremity, an emissary was sent to him by the Zamorin, to promise him pardon and oblivion of his offenses if he would give up to him the Portuguese. But Triumpara, whose fidelity cannot be sufficiently commended, answered, "that the Zamorin might use his rights of victory; that he was not ignorant of the perils by which he was menaced, but that it was not in the power of any man to make him a traitor and a perjurer." No one could have made a nobler return than this for the desertion and cowardice of Sodrez.

Vincent Sodrez had arrived at the Straits of Bab-el-Mandeb, when a fearful tempest occurred, in which his ship split upon the rocks, and he and his brother perished. The survivors regarded this event as a judgment of Providence for their bad conduct, and they made haste, with all sails set, to return to Cochin. They were detained by contrary winds at the Laccadive Islands, and were there joined by another Portuguese squadron under the command of Francisco d'Albuquerque, who had sailed from Lisbon almost at the same time as his cousin Alphonzo d'Albuquerque the most distinguished captain of the period, who with the title of Capitam mor had started from Belem at the beginning of April, 1503.

The arrival of Francisco d'Albuquerque placed the Portuguese affairs, which had been so gravely compromised by the criminal conduct of Sodrez, upon a better footing,

and at the same time effected the rescue of Triumpara, their sole and faithful ally. The besiegers fled at the sight of the Portuguese squadron, without even a show of resistance, and the Europeans in conjunction with the troops of the King of Cochin ravaged the Malabar Coast. As a consequence of these events, Triumpara allowed his allies to construct a second fortress in his dominions, and authorized an augmentation of the number and importance of their mercantile houses. This was the moment that witnessed the arrival of Alphonzo d'Albuquerque, the man destined to be the real creator of the Portuguese Empire in the Indies. Diaz, Cabral, and Gama, had prepared the way, but Albuquerque was the leader of large views who was needed to determine which were the principal towns that must be seized in order to place the Portuguese dominion upon a solid and lasting basis. Thus every particular of the history of this man who showed so great a genius for colonization, is of the deepest interest, and it is well worth while to record some particulars of his family, his education, and his early exploits.

Alphonzo d'Alboquerque, or d'Albuquerque, was born in 1453 at Alhandra, eighteen miles from Lisbon. Through his father Gonzalo d'Albuquerque, the Lord of Villaverde, he was descended, but illegitimately, from King Diniz; and through his mother from the Menezez, the great explorers. Brought up at the court of Alonzo V., he there received as liberal and thorough an education as was possible at the period. He made an especial study of the great writers of antiquity, whose influence may be traced in the majesty and accuracy of his own style, and of mathematics of which he knew as much as could be learned at that time. After staying for some years at Arzila, an African town which was under the dominion of Alonzo V., he returned to Portugal, and was appointed Master of the Horse to John II., a prince whose chief anxiety was to extend the name and power of Portugal beyond the seas. It is evident that it was to the constant attendance upon the king imposed upon him by the duties of his office, that Albuquerque owed the inclination of his mind towards geographical studies, and his anxious desire to find the means of giving to his country the Empire of the Indies. He had already taken part in an expedition sent to the succor of

the King of Naples against an incursion of the Turks, and in 1489, had been charged with the commission of re-victualing and defending the fortress of Graciosa, upon the coast of Larache.

We must now return from this digression and take up the history of Albuquerque, from the time of his arrival in India in 1503. It took him but a few days to become thoroughly aware of the position of affairs; he perceived that the commerce of Portugal must depend upon conquest for its power of development. But his first enterprise was proportioned to the feebleness of his resources; he laid siege to Raphelim, which he wished to make a military station for his countrymen, and then with two ships he undertook a reconnaissance of the coast of Hindostan. Being attacked quite unexpectedly both by land and sea, he was on the point of yielding when the fortunate arrival of his cousin Francisco turned the combat, and put the Zamorin's troops to flight. The importance of this victory was considerable; the conquerors remained masters of an immense booty and quantities of precious stones, which had the result of stimulating the Portuguese spirit of covetousness; at the same time it confirmed Albuquerque in his designs, for the execution of which the consent of the king was needful, and also more considerable resources. He therefore set out on his return to Lisbon, where he arrived in July, 1504.

This same year, King Emmanuel wishing to organize a regular government in the Indies, had made Tristan da Cunha his viceroy, but Da Cunha having become temporarily blind was obliged to resign his power before he had exercised it. The king's choice next fell upon Francisco d'Almeida, who set out with his son in 1505. It will be soon seen what were the means which he considered should be employed to assure the triumph of his countrymen.

On the 6th of March, 1506, sixteen vessels left Lisbon under the command of Tristan da Cunha, who had by that time regained his health. With him went Alphonzo Albuquerque, carrying with him, but unknown to himself, his patent of Viceroy of India. He was ordered not to open the sealed packet until three years should have expired, when Almeida would have completed the term of his mission.

This numerous fleet, after having stopped at the Cape de Verd Islands and discovered Cape St. Augustine in Brazil,

steered directly for the unexplored parts of the South Atlantic, and went so far south that the old chroniclers assert that several sailors being too lightly clad died from cold, while the others were scarcely able to work the ships. In 37° 8′ south latitude, and 14° 21′ west longitude, Da Cunha discovered three small uninhabited islands, of which the largest still bears his name. A storm prevented a landing there, and so completely dispersed the fleet that the admiral could not get his vessels together again before he arrived at Mozambique. In sailing along this African coast he explored the island of Madagascar or Sam-Lorenzo, which had just been discovered by Soarez, who was in command of eight vessels which Almeida was sending back to Europe; it was not thought advisable to make a settlement upon the island.

After having wintered at Mozambique, Da Cunha landed three ambassadors at Melinda, who were to reach Abyssinia by traveling overland, then he anchored at Brava, which Coutinho, one of his lieutenants, had been unable to subjugate. The Portuguese now laid siege to this town, which resisted bravely, but which yielded in the end, thanks to the courage of the enemy and the perfection of their arms. The population was massacred without mercy, and the town pillaged and burnt. Upon Magadoxo, another town on the African coast, Cunha tried but in vain, to impose his authority. The strength of the town and the stubborn resolution shown by the numerous population as well as the approach of winter forced him to raise the siege. He then turned his arms against Socotra, at the entrance of the Gulf of Aden, where he carried the fortress. The whole of the garrison were put to the sword, the only man spared being an old blind soldier, who was discovered hidden in a well. When asked how he had been able to get down there, he answered: "The blind only see the road which leads to liberty." At Socotra, the two Portuguese chiefs constructed the fort of Coco, intended by Albuquerque to command the Gulf of Aden and the Red Sea, by the Strait of Bab-el-Mandeb, thus cutting one of the lines of communication with the Indies, which was the most used by the Venetians.

Here Da Cunha and Albuquerque separated, the former going to India to obtain a cargo of spices, the latter officially

invested with the title of Capitam mor, and bent on the realization of his vast schemes, setting out on the 10th of August, 1507, for Ormuz, having left his nephew Alfonzo da Noronha in charge of the new fortress. He took in succession, and as if to get his hand in for the work, Calayati, where were found immense stores, Curiaty and Mascati, which he gave up to pillage, fire, and destruction, in order to avenge a series of acts of treachery easily understood by those who know the duplicity of these eastern people. The success which he had just gained at Mascati, important as it was, did not content Albuquerque. He dreamed of other and grander projects, of which the execution was, however, much compromised by the jealousy of the captains under his orders, and notably of Joao da Nova, who contemplated abandoning his chief, and whom Albuquerque was obliged to place under arrest on board his own ship. After having suppressed these beginnings of disobedience and rebellion, the Capitam mor reached Orfacati, which was taken after a vigorous resistance.

It is a curious fact that Albuquerque had long heard Ormuz spoken of, but that as yet he was ignorant of its position. He knew that this town served as an entre pôt for all the merchandise passing from Asia into Europe. Its riches and power, the number of its inhabitants and the beauty of its monuments were at that time celebrated throughout the East, so much so that there was a common saying, "If the world be a ring, Ormuz is the precious stone set in it." Albuquerque had resolved to take this town not only because in itself it was a prize worth having, but also because it commanded the whole of the Persian Gulf, which was the second of the great commercial roads between the East and West. Without saying anything to the captains of his fleet, who, without doubt, would have rebelled at the idea of attacking so strong a town, and the capital of a powerful empire, Albuquerque gave orders to double Cape Mussendom, and the fleet soon entered the Strait of Ormuz, the door of the Persian Gulf, from whence was seen rising in all its magnificence a busy town built upon a rocky island, provided with formidable artillery and protected by an army amounting to not less than from fifteen to twenty thousand men, while its harbor enclosed a fleet more numerous than could have been suspected at first sight. At this sight the

captains made urgent representations upon the danger that Albuquerque would run in attacking so well-prepared a town, and made the most of the plea how very bad an influence a reverse would exercise. To this discourse Albuquerque answered, that indeed, "it was a very great affair, but that it was too late to draw back, and that he had greater need of determination than of good advice."

Scarcely was the anchor dropped before Albuquerque declared his ultimatum. Although the forces under his orders were very disproportionate in numbers, the Capitam mor imperiously demanded that Ormuz should recognize the suzerainty of the King of Portugal and submit to his envoy, if it did not wish to share the same fate as Mascati. The king, Seif-Ed-din, who was then reigning over Ormuz, was still a child, and his Prime Minister, Kodja-Atar, a skillful and cunning diplomatist, governed in the king's name. Without denying in principle the pretensions of Albuquerque, the Prime Minister wished to gain time, to allow contingents to arrive for the help of the capital; but the admiral, who guessed his object, did not hesitate, after waiting three days, to attack the formidable fleet at anchor under the guns of Ormuz, with his five vessels and the *Flor de la Mar*, the finest and largest ship of that time. The combat was bloody and long undecided, but when they saw fortune was against them the Moors, abandoning their vessels, endeavored to swim on shore. The Portuguese upon this, jumped into their boats, pursuing the Moors vigorously, and causing horrible carnage. Albuquerque next directed his efforts against a large wooden jetty defended by numerous guns and by archers, whose well-aimed arrows wounded a number of the Portuguese and the general himself, who, however, was not hindered thereby from landing and proceeding to burn the suburbs of the town. Convinced that resistance would soon be impossible, and that their capital was in dander of being destroyed, the Moors hoisted a flag of truce, and signed a treaty, by which Seif-Ed-din declared himself the vassal of King Emmanuel, promised to pay him an annual tribute of 15,000 seraphins or xarafins, and gave to the conquerors a site for a fortress, which, in spite of the repugnance and reproaches of the Portuguese captains, was soon put into a condition of resistance. Unfortunately some deserters quickly brought these unworthy dissensions

to the knowledge of Kodja-Atar, who profited by them to avoid, under various pretexts, fulfilling the execution of the articles of the new treaty. Some days afterwards Joao da Nova and two other captains, jealous of the successes of Albuquerque, and trampling in the dust every sentiment of honor, discipline, and patriotism, left him to go to the Indies; while Albuquerque was obliged by this cowardly desertion to withdraw without being able even to guard the fortress which he had been at so much pains to construct. He went to Socotra, where the garrison was in need of help, and then returned to cruise before Ormuz, but thinking himself too weak to undertake anything, he retired for a time to Goa, arriving there at the end of the year 1508.

What had been occurring on the Malabar coast during this long and adventurous campaign? The answer may be summed up in a few lines. It will be remembered that Almeida had set out from Belem in 1505 with a fleet of twenty-two sail, carrying soldiers to the number of 1,500 men. First he seized Quiloa and then Mombaz, of which the "cavaliers, as the inhabitants loved to repeat, did not yield as easily as the chicken hearts of Quiloa." Out of the enormous booty, which by the fall of this town fell into the hands of the Portuguese, Almeida only took one arrow as his share of the spoil, thus giving a rare example of disinterestedness. After having stopped at Melinda he went on to Cochin, where he delivered to the Rajah the golden crown sent to him by Emmanuel, whilst he himself, with the presumptuous vanity of which he gave so many proofs, assumed the title of viceroy. Then, after commencing a fortress at Sofala, destined to overawe the Mussulmans of that coast, Almeida and his son, Lorenzo, scoured the Indian Seas, destroying the Malabar fleets, capturing some trading vessels, and causing great injury to the enemy, whose accustomed commercial raids were thus intercepted. But for this cruising warfare a numerous fleet of light vessels was needed, for there was scarcely any other harbor of refuge except Cochin upon the Asiatic coast. How preferable was Albuquerque's system of establishing himself in the country in a permanent manner, by constructing fortresses in all directions, by seizing upon the most powerful cities, whence it was easy to branch off into the interior of the country, by rendering himself master of the keys of the straits, and

thus ensuring with much less risk, and more solidity, the monopoly of the Indian commerce.

Meantime the victories of Almeida and the conquests of Albuquerque had much disquieted the Sultan of Egypt. The abandonment of the Alexandrian route caused a great diminution in the amount of imposts and dues of customs, anchorage, and transit, which were laid upon the merchandise of Asia as it passed through his states. Therefore, with the help of the Venetians, who furnished him with the wood for ship-building as well as with skillful sailors, he fitted out a squadron of twelve large ships, which came as far as Cochin, seeking the fleet of Lorenzo d'Almeida and defeating it in a bloody combat in which Lorenzo was killed. If the sorrow of the viceroy were great at this sad news, at least he did not let it appear outwardly, but set to work to make all preparations for taking prompt vengeance upon the Roumis,—an appellation which shows the lasting terror attaching to the name of the Romans, and commonly used at this time upon the Malabar coast, for all Mussulman soldiers coming from Byzantium. With nineteen sail Almeida appeared before the fort where his son had been killed, and gained a great victory, but one sullied, it must be confessed, by most frightful cruelties, so much so that it soon became a common saying: "May the anger of the Franks fall upon thee as it fell upon Daboul." Not content with this first success, Almeida, some weeks later, annihilated the combined forces of the Sultan of Egypt, and the Rajah of Calicut, before Diu. This victory made a profound impression in India, and put an end to the power of the *Mahumetists* of Egypt.

Joao da Nova and the other captains, who had abandoned Albuquerque before Ormuz, had decided to rejoin Almeida; they had excused their disobedience by calumnies, in consequence of which a judicial process was about to be instituted against Albuquerque, when the viceroy received the news of his being replaced in his office by Albuquerque. At first Almeida declared that obedience must be rendered to this sovereign decree, but afterwards influenced by the traitors, who feared that they would be severely punished when the power had passed into the hands of Albuquerque, he repaired to Cochin in the month of March, 1509, with the fixed determination not to give up the command to his suc-

cessor. There were disagreeable and painful disputes between these two great men, in which all the wrong done was on the side of Almeida. Albuquerque was about to be sent to Lisbon with chains on his feet, when a fleet of fifteen sail entered the harbor, under the command of the grand Marshal of Portugal, Ferdinand Coutinho. The latter took the part of the prisoner, whom he immediately released, notifying again to Almeida the powers held by Albuquerque from the king, and threatening him with the great anger of Emmanuel if he refused to obey. Almeida could do nothing but yield, and he then did it nobly. As for Joao da Nova, the author of these sad misunderstandings, he died some time afterwards, forsaken by everybody, and had scarcely anyone to follow him to the grave except the new viceroy, who thus generously forgot the injuries done to 'Alphonzo Albuquerque.

Immediately after the departure of 'Almeida, the grand Marshal Coutinho declared that, having come to India with the intention of destroying Calicut, he intended to turn to account the absence of the Zamorin from his capital. In vain the new viceroy endeavored to modify his zeal and induce him to take the wise measures recommended by experience. Coutinho would listen to nothing, and Albuquerque was obliged to follow him. Calicut, taken by surprise, was easily set on fire; but the Portuguese, having lingered to pillage the Zamorin's palace, were fiercely attacked in rear by the Nairs, who had succeeded in rallying their troops. Coutinho, whose impetuous valor led him into the greatest danger, was killed, and it required all the skill and coolness of the viceroy to effect a re-embarkation of the troops under the enemy's fire, and to preserve the soldiers of the King of Portugal from total destruction.

On his return to Cintagara, a seaport which was a dependency of the King of Narsingue, with whom the Portuguese had been able to form an alliance, Albuquerque learnt that Goa, the capital of a powerful kingdom, was a prey to political and religious anarchy. Several chiefs were contending there for power. One of them, Melek Cufergugi, was just on the point of seizing the throne, and it was important to profit by the circumstances of the moment, and attack the town before he should have been able to gather a force capable of resisting the Portuguese. The viceroy

perceived all the importance of this counsel. The situation of Goa, giving access as it did to the kingdom of Narsingue and to the Deccan, had already struck him forcibly. He did not delay, and soon the Portuguese reckoned one conquest more. Goa the Golden, a cosmopolitan town, where were mingled with all the various sects of Islam Parsees, the worshipers of fire, and even some Christians, submitted to Albuquerque, and soon became, under a wise and strict government which understood how to conciliate the sympathies of opposing sects, the capital, the chief fortress, and the principal seat of trade of the Portuguese empire of the Indies.

By degrees and with the course of years the knowledge of these rich countries had increased. Much information had been gathered together by all those who had plowed these sunny seas in their gallant vessels, and it was now known what was the center of production of those spices which people went so far to seek, and for whose acquisition they encountered so many perils. It was already several years since Almeida had founded the first Portuguese factories in Ceylon, the ancient Taprobane. The Islands of Sunda, and the Peninsula of Malacca, were now exciting the desires of King Emmanuel, who had already been surnamed "the fortunate." He resolved to send a fleet to explore them, for Albuquerque had enough to do in India to restrain the vengeful Rajahs, and the Mussulmans—Moors as they were then called—who were always ready to shake off the yoke. This new expedition was under the command of Diego Lopez Sequeira, and according to the traditional policy of the Moors, was at first amicably received at Malacca; but when the suspicions of Lopez Sequeira had been lulled to sleep by reiterated protestations of alliance, the whole population suddenly rose against him, and he was forced to return on board, but not without leaving thirty of his companions in the hands of the Malays. These events had already happened some time when the news of the taking of Goa arrived at Malacca. The *bendarra,* or Minister of Justice, who exercised regal power in the name of his nephew who was still a child, fearing the vengeance which the Portuguese would doubtless exact for his treachery, resolved to pacify them. He went to visit his prisoners, excused himself to them by swearing that all had

been done unknown to him and against his will, for he desired nothing so much as to see the Portuguese establish themselves in Malacca; also he was about to order the authors of the treason to be sought out and punished. The prisoners naturally gave no credence to these lying declarations, but profiting by the comparative liberty which was henceforth granted to them, they cleverly succeeded in conveying to Albuquerque some valuable information upon the position and strength of the town.

Albuquerque with much trouble collected a fleet of nineteen men of war, carrying fourteen hundred men, amongst whom there were only eight hundred Portuguese. This being the case, ought he to venture in obedience to the wish of King Emmanuel to steer for Aden, the key of the Red Sea, which it was important to master in preparation for opposing the passage of a new squadron, which the Sultan of Egypt was intending to send to India? Albuquerque hesitated, when a change in the trade winds occurred which put an end to his irresolution. In fact, it was impossible to reach Aden in the teeth of the prevailing wind, while it was favorable for a descent upon Malacca. This town, at that time in its full splendor, did not contain less than 100,000 inhabitants. If many of the houses were built of wood, and roofed with the leaves of the palm tree, yet they were equaled in number by the more important buildings, such as mosques and towers built of stone, which stretched out in a long panorama for the distance of three miles. The ships of India, China, and of the Malay kingdoms of the Sunda Islands, met in its harbor, where numerous vessels coming from the Malabar coast, the Persian Gulf, the Red Sea, and the coast of Africa traded in merchandise of all kinds and of every country.

When the Rajah of Malacca saw the Portuguese fleet arrive in his waters, he felt that it was necessary to appear to give satisfaction to the foreigners by sacrificing the minister who had excited their anger and caused their arrival. His ambassador therefore came to the viceroy to announce the death of the *bendarra*, and to find out what were the intentions of the Portuguese. Albuquerque answered by demanding the prisoners who had remained in the hands of the Rajah, but the latter, desirous of gaining time to allow for the expected change in the trade wind,—a change which

would force the Portuguese to regain the Malabar coast, or else would oblige them to remain at Malacca, where he hoped to be able to exterminate them,—invented a thousand pretexts for delay, and in the meantime according to the old narratives, he prepared a battery of 8,000 cannon, and collected troops to the number of 20,000. At length Albuquerque lost his patience, and ordered some houses and several Gujerat vessels to be set on fire, a beginning of execution which speedily brought about the restoration of the prisoners; he then claimed 20,000 crusades as indemnity for the damage caused to the fleet of Lopez Sequeira, and finally he demanded to be allowed to build a fortress within the town itself, which should also serve as a counting-house for the merchants. This demand could not be complied with as Albuquerque well knew; but upon the refusal he resolved to seize the town, fixing upon St. James's day for the attack. The town was taken quarter by quarter, house by house, after a truly heroic struggle and a most vigorous defense, which lasted for nine whole days, notwithstanding the employment of extraordinary devices, such as elephants of war, poisoned sabers and arrows, barricades, and skillfully concealed troops. An enormous booty was divided amongst the soldiers, Albuquerque only reserving to himself six lions, of gold according to some accounts, of iron according to others, which he intended for the adornment of his tomb, to perpetuate the memory of his victory.

The door which gave access to Oceania, and to Upper Asia, was henceforth open. Many nations unknown till this time would now have intercourse with Europeans. The strange manners and fabulous history of many people were about to be disclosed to the astonished West. A new era had commenced, and these great results were due to the unbridled audacity, and indomitable courage of a nation whose country was scarcely discernible upon the map of the world!

It was in part owing to the religious toleration which Albuquerque displayed, a toleration which contrasts strangely with the cruel fanaticism of the Spaniards, and in part to the skillful measures which he took, that the prosperity of Malacca resisted the rude shock which it had received. In the course of a few months no trace remained of the trials which the town had experienced, except the sight of the Portuguese banner floating proudly over this great city,

which had now become the head and vanguard of the colonial empire of this people, small in numbers, but rendered great by their courage and their spirit of enterprise.

Great and wonderful as this new conquest might be, it had not made Albuquerque forget his former projects. If he had appeared to have renounced them, it was only because circumstances had not hitherto seemed favorable for their execution. With that tenacity of determination which formed the basis of his character, while still at the southern extremity of the empire which he was founding, his thoughts were fixed upon the northern part of it, upon Ormuz, which the jealousy and treachery of his subordinates had obliged him to abandon at the beginning of his career, at the very moment when success was about to crown his persevering efforts; it was Ormuz which tempted him still.

The fame of his exploits and the terror inspired by his name had decided Kodja Atar to make some advances to Albuquerque, to ask for a treaty, and to send the arrears of the tribute which had been formerly imposed. Although the viceroy placed no belief on these repeated declarations of friendship—on that Moorish faith which deserves to be as notorious as Punic faith,—he nevertheless welcomed them, whilst waiting for the power to establish his dominion after a permanent manner in these countries. In 1513 or 1514—the exact date is not ascertained—when his fleet and soldiers were set at liberty by the conquest of Malacca and the tranquillity of his other possessions, Albuquerque set sail for the Persian Gulf. Immediately upon his arrival, although a series of revolutions had changed the government of Ormuz and the power was then in the hands of a usurper named Rais-Nordim or Noureddin, Albuquerque demanded that the fortress, which had been formerly begun, should be immediately placed in his hands. After having it repaired and finished, he took part against the pretender Rais Named, in the quarrel which was then dividing the town of Ormuz and preparing it to fall under the dominion of Persia. He seized upon the town and bestowed it upon the aspirant who had accepted his conditions beforehand, and who appeared to Albuquerque to present the most solid guarantees of submission and fidelity. Besides, it would not be difficult in the future to make this certain, for Albu-

querque left in the new fortress a garrison perfectly able to bring Rais-Nordim to repentance for the slightest attempt at revolt, or the least desire of independence.

A well-known anecdote is related of this expedition to Ormuz, but one which, even from its notoriety, we should be blamed for omitting. When the King of Persia sent to Noureddin to demand the tribute which the sovereigns of Ormuz had been in the habit of paying to him, Albuquerque gave orders, that a quantity of bullets, cannon-balls and shells, should be brought from his ships, and showing them to the ambassadors he told them that such was the coin in which the King of Portugal was accustomed to pay tribute. It does not appear that the Persian ambassadors repeated their demand.

With his usual wisdom, the viceroy did not wound the feelings of the inhabitants, who speedily returned to the town. Far from squeezing all he could from them, as his successors were destined soon to do, he established an upright system of government which caused the Portuguese name to be loved and respected.

At the same time that he was himself accomplishing these marvelous labors, Albuquerque had desired some of his lieutenants to explore the unknown regions to which access had been given by the taking of Malacca. For this purpose he gave to Antonio and Francisco d'Abreu the command of a small squadron carrying 220 men, with which they explored the whole of the Sunda Archipelago, Sumatra, Java, Anjoam, Simbala, Galam, &c.; then being not far from the coast of Australia they sailed back again to the north and arrived at the Islands of Duro and Amboyna, which form part of the Molucca group. After having made a voyage of more than 1,500 miles amongst dangerous archipelagoes strewn with rocks and coral reefs, and amidst populations often hostile, and after loading their ships there with cloves, nutmegs, sandal-wood, mace, and pearls, they set sail for Malacca in 1512. This time the veritable land of spices had been reached, it now only remained to found establishments there and to take possession of it definitely, which was not likely to be long postponed.

It has been often remarked that the Tarpeian rock is not far from the Capitol; of this Albuquerque was destined to make experience, and his last days were to be saddened by

unmerited disgrace, the result of calumnies and lies, and of a skillfully woven plot, which although it succeeded in temporarily clouding his reputation with King Emmanuel, has not availed to obscure the glory of this great man in the eyes of posterity. Already there had been an effort made to persuade the king that the taking possession of Goa had been a grave error; its unhealthy climate must, it was said, decimate the European population in a short time, but the king, with perfect confidence in the experience and prudence of his lieutenant, had refused to listen to his enemies, for which Albuquerque had publicly thanked him, saying,—"I think more is owing to King Emmanuel for having defended Goa against the Portuguese, than to myself for having twice conquered it." But in 1514 Albuquerque had asked the king to bestow upon him as a reward for his services the title of Duke of Goa, and it was this imprudent step which gave an advantage to his adversaries.

Soarez d'Albergavia and Diogo Mendez, whom Albuquerque had sent as prisoners to Portugal after they had publicly declared themselves his enemies, had succeeded not only in clearing themselves from the accusation brought against them by the viceroy, but in persuading Emmanuel that he wished to constitute an independent duchy of which Goa should be the capital, and they ended by obtaining his disgrace. The news of the appointment of Albergavia to the post of Captain-General of Cochin, reached Albuquerque as he was issuing from the Strait of Ormuz on his return to the Malabar coast, and at a time when he was suffering much from disease. "He raised his hands towards heaven," says M. F. Denis, in his excellent History of Portugal, "and pronounced these few words: Behold I am in disgrace with the king on account of my love to men, and with men on account of my love to the king. Turn thee, old man, to the Church, and prepare to die, for it behoves thine honor that thou shouldest die, and never hast thou neglected to do aught which thine honor demands." Whereupon, being arrived in the roadstead of Goa, Alphonzo Albuquerque set in order the affairs of his conscience with the Church, caused himself to be clad in the dress of the Order of St. Iago of which he was a commander, and then "on Sunday the 16th of December, an hour before daybreak, he rendered up his soul to God. Thus ended all his

labors, without their having ever brought him any satisfaction."

Albuquerque was buried with great pomp. The soldiers who had been the faithful companions of his wonderful adventures, and the witnesses of his manifold tribulations, disputed amidst their tears for the honor of carrying his remains to their last resting place, which their commander had himself chosen. The Hindoos in their grief refused to believe that he was dead, declaring that he was gone to command the armies of the sky. A letter of King Emmanuel has been comparatively lately discovered which proves that, although he was deceived for a time by the false reports of the enemies of Albuquerque, he soon discovered his mistake, and rendered him full and entire justice. Unfortunately this letter of reparation never reached the unfortunate second Viceroy of the Indies; it would have sweetened his last moments, whereas he had the pain of dying in the belief that the sovereign for whose glory and the increase of whose power he had consecrated his life, had in the end proved ungrateful towards him. "With Albuquerque," says Michelet, "all humanity and all justice disappeared from amongst the conquerors. Long years after his death the Indians would repair to the tomb of the great Albuquerque, to demand justice of him against the oppressions of his successors."

Many causes may be adduced as bringing about the rapid decay and dismemberment of that great colonial empire with which Albuquerque had enriched his country, and which even amidst its ruins has left ineffaceable traces upon India. With Michelet we may cite the distance and dispersion of the various factories, the smallness of the population of Portugal, but little suited to the wide extension of her establishments, the love of brigandage, and the exactions of a bad government, but beyond all, that indomitable national pride which forbade any mingling of the victors with the vanquished.

The fall of the colonial empire was hindered for a time by the influence of two heroic men; the first was Juan de Castro, who after having had control of untold riches, remained so poor that he had not even the wherewithal to buy a fowl in his last illness; and the second, Ataïde, who once again gave the corrupt eastern populations an ex-

ample of the most manly virtues, and of the most upright administration. But after their time the empire began to drop to pieces, and fell by degrees into the hands of the Spaniards and the Dutch, who in their turn were unable to preserve it intact. All passes away, all is changed. What can be said but to repeat the Spanish saw, in applying it to the case of empires, "Life is but a dream"?

V. XV Verne

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BOOK II

Seekers and Traders

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Seekers and Traders

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CHAPTER I

THE DISCOVERERS OF CENTRAL AMERICA

THE letters and narratives of Columbus and his companions, especially those dwelling upon the large quantity of gold and pearls found in the recently discovered countries, had inflamed the imagination of eager traders, and of numbers of gentlemen who loved adventure. On the 10th of April, 1495, the Spanish government had issued an order allowing anyone who might wish to do so, to go and discover new countries; but this privilege was so much abused, and Columbus complained so bitterly of its trenching upon established rights, that the permission was withdrawn on the 2nd of June, 1497, and four years later it became necessary to repeat the prohibition with more severe penalties attached to its infringement. The effect of the royal decree was at once to produce a kind of general rush to the Indies, and this was favored by Bishop Fonseca of Badajoz, through whose hands passed all business connected with the Indies, and of whom Columbus had had so much reason to complain.

The admiral had but just left San-Lucar on his third voyage, when four expeditions of discovery were fitted out almost at the same moment, at the cost of some rich shipowners, foremost among whom we find the Pinzons and Americus Vespucius. The first of these expeditions, which left the port of Santa Maria on the 20th of May, 1499, consisted of four vessels, and was commanded by Alonzo Ojeda. Juan de la Cosa sailed with him as pilot; Americus Vespucius was also on board, without any very clearly defined duties, but he would seem to have been astronomer to the fleet.

Before entering on a brief account of this voyage, we will glance for a few moments at the three men whom we have just named; the last of the three especially, plays a most important part in the discovery of the New World, which received its name from him.

Ojeda, born at Cuença about 1465, and brought up in the household of the Duke of Medina-Celi, had gained his first experience in arms in the wars against the Moors. Columbus enrolled him amongst the adventurers whom he recruited for his second voyage, when Ojeda distinguished himself alike by his cool courage and his readiness in surmounting all difficulties. What caused his complete rupture with Columbus remains a mystery; it appears still more inexplicable when we think of the distinguished services that Ojeda had rendered, especially in 1495, at the battle of La Vega. All we know is, that on Ojeda's return to Spain he found shelter and protection with Bishop Fonseca. It is said even that the Indian minister supplied him with the journal of the admiral's last voyage, and the map of the countries which Columbus had discovered.

The first pilot employed by Ojeda was Juan de la Cosa, born probably at Santona, in the Biscayan country. He had often sailed along the coast of Africa before accompanying Columbus on his first voyage, while in the second expedition he filled the post of hydrographer (*mastro de hacer cartas*).

As specimens of La Cosa's talent in drawing maps may be mentioned two very curious ones still extant; one showing all the territory that had been acquired in Africa in 1500, the other on vellum, and enriched with color like the first, giving the discoveries made by Columbus and his successors. The second pilot was Bartholomew Roldan, who had likewise sailed with Columbus on his voyage to Paria.

As to Americus Vespucius, his duties were not, as we have said, very clearly defined; he was there to aid in making discoveries (*per ajutare a discoprire,* says the Italian text of his letter to Soderini). Born at Florence on the 9th of March, 1451, Amerigo Vespucci belonged to a family of distinction and wealth. He had made mathematics, natural philosophy, and astrology (as it was then called) his special studies. His knowledge of history and literature, judging from his letters, appears to have been some-

what vague and ill-digested. He left Florence in 1492 without any special aim in view, and went to Spain, where he occupied himself at first in commercial pursuits. We hear of him in Seville acting as factor in the powerful trading house of his fellow countryman, Juanoto Berardi. As this house had advanced money to Columbus for his second voyage, it is not unlikely that Vespucius had become acquainted with the admiral at this period of his career. On Juanoto's death in 1495, Vespucius was placed by his heirs at the head of the financial department of the house. Whether he may have been tired of a situation that he thought below his powers, or been seized in his turn with the fever for making new discoveries, or whether he hoped to make his fortune rapidly in the new countries reputed to be so rich; whatever in short may have been the motive that actuated him, at least this we know, that he joined Ojeda's expedition in 1499, this fact being so stated in Ojeda's deposition in the law-suit instituted by the Treasury with the heirs of Columbus.

The flotilla, consisting of four vessels, set sail on the 20th of May from Santa Maria, taking a southwesterly course, and in twenty-seven days the American continent was sighted at the place which was named Venezuela, because the houses being built upon piles reminded the beholders of Venice. Ojeda, after some ineffectual attempts to hold intercourse with the natives, with whom he had several skirmishes, next saw the Island of Margarita; after sailing about 250 miles to the east of the river Orinoco he reached the Gulf of Paria, and entered a bay called the Bay of *Las Perlas,* from the natives of that part being employed in the pearl fisheries.

Guided by the maps of Columbus, Ojeda passed by the Dragon's Mouth, which separates Trinidad from the continent, and returned westward to Cape *La Vela.* Then, after touching at the Caribbee Islands, where he made a number of prisoners, whom he hoped to sell for slaves in Spain, he was obliged to cast anchor at Yaquimo, in Hispaniola, on the 5th of September, 1499.

Columbus, knowing Ojeda's courage and his restless spirit only too well, feared that he would introduce a new element of discord into the colony. He therefore despatched Francesco Roldan with two caravels to inquire into

his motives in coming to the island, and if necessary to prevent his landing. The admiral's fears were but too well grounded; Ojeda had scarcely landed before he had an interview with some of the malcontents, inciting them to a rising at Xaragua, and to a determination to expel Columbus. After some skirmishes, which had not ended to Ojeda's advantage, a meeting was arranged for him with Roldan, Diego d'Escobar, and Juan de la Cosa, when they prevailed upon him to leave the island. "He took with him," said Las Casas, "a prodigious cargo of slaves, whom he sold in the market at Cadiz for enormous sums of money." He returned to Spain in February, 1500, where he had been preceded by Americus Vespucius and Roldan on the 18th of October, 1499.

The most southerly point that Ojeda had reached in this voyage was 4° north latitude, and he had only spent fourteen weeks on the voyage of discovery, properly so called. If we appear to have dwelt at some length upon this voyage, it is because it was the first one made by Vespucius. Some authors, Varnhagen for instance, and quite recently, Mr. H. Major, in his history of Prince Henry the Navigator, assert that Vespucius's first voyage was in 1497 and consequently that he must have seen the American continent before Columbus, but we prefer to follow Humboldt, who spent so many years in studying the history of the discovery of America, in his opinion that 1499 was the right date, also M. Ed. Charton and M. Jules Codine, the latter of whom discussed this question in the Report of the Geographical Society for 1873 *apropos* of Mr. Major's book.

"If it were true," says Voltaire, "that Vespucius had discovered the American Continent, yet the glory would not be his; it belongs undoubtedly to the man who had the genius and courage to undertake the first voyage, to Columbus." As Newton says in his argument with Leibnitz, "the glory is due only to the inventor." But we agree with M. Codine when he says, "How can we allow that there was an expedition in 1497 which resulted in the discovery of above 2,500 miles of the coast-line of the mainland, when there is no trace of it left either among the great historians of that time, or in the legal depositions in connection with the claims made by the heir of Columbus against the Span-

ish Government, in which the priority of the discoveries of each leader of an expedition is carefully mentioned, with the part of the coast explored by each?" Finally, the authentic documents extracted from the archives of the *Casa de contratacion* make it evident that Vespucius was entrusted with the preparation of the vessels destined for the third voyage of Columbus at Seville and at San Lucar from the middle of August, 1497, till the departure of Columbus on the 30th of May, 1498. The narratives of the voyages of Vespucius are very diffuse and wanting in precision and order; the information they give upon the places he visited is so vague, that it might apply to one part of the coast as well as to another; as to the localities treated of, as well as of the companions of Vespucius, there are no indications given of a nature to aid the historian. Not a single name is given of any well-known person, and the dates are contradictory in those famous letters which have given endless work to commentators. Humboldt says of them: "There is an element of discord in the most authentic documents relating to the Florentine navigator." We have given an account of Ojeda's first voyage, which coincides with that of Vespucius according to Humboldt, who has compared the principal incidents of the two narratives. Varnhagen asserts that Vespucius, having started on the 10th of May, 1497, entered the Gulf of Honduras on the 10th of June, coasted by Yucatan and Mexico, sailed up the Mississippi, and at the end of February, 1498, doubled the Cape of Florida. After anchoring for thirty-seven days at the mouth of the St. Lawrence, he returned to Cadiz in October, 1498.

If Vespucius had really made this marvelous voyage, he would have far outstripped all the navigators of his time, and would have fully deserved that his name should be given to the newly-discovered continent, whose coast-line he had explored for so great a distance. But nothing is less certain, and Humboldt's opinion has hitherto appeared to the best writers to offer the largest amount of probability.

Americus Vespucius made three other voyages. Humboldt identifies the first with that of Vincent Yañez Pinzon, and M. d'Avezac with that of Diego de Lepe (1499-1500). At the close of this latter year, Giuliano Bartholomeo di Giocondo induced Vespucius to enter the ser-

vice of Emmanuel, King of Portugal, and he accomplished two more voyages at the expense of his new master. On the first of these two voyages, he was no higher in command than he had been in his earlier ones, and only accompanied the expedition as one whose intimate acquaintance with all nautical matters might prove of service under certain circumstances. During this voyage the ships coasted along the American shores from Cape St. Augustine to 52° of south latitude. The fourth voyage of Vespucius was marked by the wreck of the flag-ship off the Island of Fernando de Noronha, which prevented the other vessels from continuing their voyage towards Malacca by way of the Cape of Good Hope, and obliged the crews to land at All Saints' Bay, in Brazil.

This fourth voyage was unquestionably made with Gonzalo Coelho, but we are quite ignorant as to who was in command on the third voyage. These various expeditions had not tended to enrich Vespucius, while his position at the Portuguese court was so far from satisfactory that he determined to re-enter the service of the King of Spain. By him he was made *Piloto Mayor* on the 22nd of March, 1508. There were some valuable emoluments attached for his advantage to this appointment, which enabled him to end his days, if not as a rich man, at least as one far removed from want. He died at Seville on the 22nd of February, 1512, with the same conviction as Columbus, that he had reached the shores of Asia. Americus Vespucius is especially famous from the New World having been named after him, instead of being called Columbia, as in all justice it should have been, but with this Vespucius had nothing to do. He was for a long time charged, though most unjustly, with impudence, falsehood, and deceit, it being alleged that he wished to veil the glory of Columbus and to arrogate to himself the honor of a discovery which did not belong to him. This was an utterly unfounded accusation, for Vespucius was both loved and esteemed by Columbus and his contemporaries, and there is nothing in his writings to justify this calumnious assertion. Seven printed documents exist which are attributed to Vespucius; they are—the abridged accounts of his four voyages, two narratives of his third and fourth voyages, in the form of letters, addressed to Lorenzo de Pier Francesco de Medici,

and a letter addressed to the same nobleman, relative to the Portuguese discoveries in the Indies. These documents, printed and bound up as small thin volumes, were soon translated into various languages and distributed throughout Europe.

It was in the year 1507 that a certain Hylacolymus, whose real name was Martin Waldtzemuller, first proposed to give the name of America to the new part of the world. He did so in a book printed at Saint Dié and called *Cosmographia introductio.* In 1509 a small geographical treatise appeared at Strasburg adopting the proposal of Hylacolymus; and in 1520 an edition of Pomponius Mela was printed at Basle, giving a map of the New World with the name of America. From this time the number of works employing the denomination proposed by Waldtzemuller increased perpetually.

Some years later, when Waldtzemuller was better informed as to the real discoverer of America and of the value to be placed upon the voyages of Vespucius, he eliminated from his book all that related to the latter, and substituted everywhere the name of Columbus for that of Vespucius, but it was too late, the same error has prevailed ever since.

As to Vespucius himself, it seems very unlikely that he was at all aware of the excitement which prevailed in Europe, nor of what was passing at St. Dié. The testimony that has been unanimously borne to his honorable and upright conduct should surely clear him from the unmerited accusations which have for too long a time clouded his memory.

Three other expeditions left Spain almost at the same time as that of Ojeda. The first of these, consisting of but one vessel, sailed from Barra Saltez in June, 1499. Pier Alonzo Nino, who had served under Columbus in his two last voyages, was its commander, and he was accompanied by Christoval Guerra, a merchant of Seville, who probably defrayed the expenses of the expedition. This voyage to the coast of Paria seems to have been dictated more by the hope of lucrative commerce than by the interests of science. No new discoveries were made, but the two voyagers returned to Spain in April, 1500, bringing with them so large a quantity of valuable pearls as to excite the

cupidity of their countrymen, who became anxious to try their own fortunes in the same direction.

The second expedition was commanded by Vincent Yañez Pinzon, the younger brother of Alonzo Pinzon who had been captain of the *Pinta* and had shown so much jealousy of Columbus, even adopting the following mendacious heraldic motto:

A Castilla y a Leon Nuevo Mundo dio Pinzon.

Yañez Pinzon, whose devotion to the admiral equaled his brother's jealousy, had advanced an eighth part of the funds required for the expedition of 1492, and had on that occasion been in command of the *Nina*.

He set out in December, 1499, with four vessels, of which only two returned to Palos at the end of September, 1500. He touched the coast of the newly discovered continent at a point near the shore visited by Ojeda some months before, and explored the coast for some 2,400 miles, discovering Cape St. Augustine at 8° 20′ south latitude, following the coast-line in a northwesterly direction to *Rio Grande*, which he named *Santa-Maria de la Mar dulce*, and continuing in the same direction as far as Cape St. Vincent. Diego de Lepe explored the same coasts with two caravels from January to June, 1500; there is nothing particular to record of this voyage beyond the very important observation that was made on the direction of the coast-line of the continent starting from Cape St. Augustine. Lepe had but just returned to Spain when two vessels left Cadiz, equipped by Rodrigo Bastidas, a wealthy and highly respectable man, with the view of making some fresh discoveries, but above all with the object of collecting as large a quantity of gold and pearls as possible, for which were to be bartered glass beads and other worthless trifles. Juan de la Cosa, whose talents as a navigator were proverbial, and who knew these coasts well from having explored them, was really at the head of this expedition. The sailors went on shore and saw the Rio Sinu, the Gulf of Urabia, and reached the *Puerto del Retrete* or *de los Escribanos*, in the Isthmus of Panama. This harbor was not visited by Columbus till the 26th of November, 1502; it is situated about seventeen miles from the once celebrated, but now destroyed town of *Nombre de Dios*. In fact this expedition, which had been organized by a merchant, became,

thanks to Juan de la Cosa, one of the voyages the most fertile in discoveries; but alas! it came to a sad termination; the vessels were lost in the Gulf of Xaragua, and Bastidas and La Cosa were obliged to make their way by land to St. Domingo. When they arrived there, Bovadilla, the upright man and model governor, whose infamous conduct to Columbus we have already mentioned, had them arrested, on the plea that they had bought some gold from the Indians of Xaragua; he sent them off to Spain, which was only reached after a fearfully stormy voyage, some of the vessels being lost on the way.

After this expedition, so fruitful in results, voyages of discovery became rather less frequent for some years; the Spaniards being occupied in asserting their supremacy in the countries in which they had already founded colonies.

The colonization of Hispaniola had commenced in 1493, when the town of Isabella was built. Two years afterwards Christopher Columbus had traveled over the island and had subjugated the poor savages, by means of those terrible dogs which had been trained to hunt Indians, and unaccustomed as the natives were to any hard work, he had forced them to toil in the mines. Both Bovadilla and Ovando treating the Indians as a herd of cattle, had divided them among the colonists as slaves. The cruelty with which this unfortunate people was treated became more and more unbearable. By means of a despicable ambush, Ovando seized the Queen of Xaragua and 300 of her principal subjects, and at a given signal they were all put to the sword without there being any crime adduced against them. "For some years," says Robertson, "the gold brought into the royal treasury of Spain amounted to about 160,000 *pesos,* an enormous sum if we take into consideration the great increase in the value of money since the beginning of the sixteenth century." In 1511 Diego Velasquez conquered Cuba with 300 men, and here again were enacted the terrible scenes of bloodshed and pillage which have rendered the Spanish name so sadly notorious. They cut off the thumbs of the natives, put out their eyes, and poured boiling oil or melted lead into their wounds, even when they did not torture them by burning them over a slow fire to extract from them the secret of the treasures of which they were believed to be the possessors. It was only natural un-

der these circumstances that the population rapidly decreased, and the day was not far off when it would be wholly exterminated. To understand fully the sufferings of this race thus odiously persecuted, the touching and horrible narrative of Las Casas must be read, himself the indefatigable defender of the Indians.

In Cuba, the Cacique Hattuey was made prisoner and condemned to be burnt. When he was tied to the stake, a Franciscan monk tried to convert him, promising him that if he would only embrace the Christian faith, he would be at once admitted to all the joys of Paradise. "Are there any Spaniards in that land of happiness and joy of which you speak?" asked Hattuey. "Yes," replied the monk, "but only those who have been just and good in their lives." "The very best among them can have neither justice nor mercy!" said the poor cacique, "I do not wish to go to any place where I should meet a single man of that accursed race."

Does not this fact suffice to paint the degree of exasperation to which these unfortunate people had been driven? And these horrors were repeated wherever the Spaniards set foot! We will throw a veil over these atrocities practiced by men who thought themselves civilized, and who pretended that they wished to convert to Christianity, the religion pre-eminently of love and mercy, a race who were in reality less savage than themselves.

In 1504 and 1505 four vessels explored the Gulf of Urabia. This was the first voyage in which Juan de la Cosa had the supreme command. This seems, too, to have been about the date of Ojeda's third voyage, when he went to the territory of Coquibacoa, a voyage that certainly was made, as Humboldt says, but of which we have no clear account.

In 1509 Juan Diaz de Solis, in concert with Vincent Yañez Pinzon, discovered a vast province, since known by the name of Yucatan.

"Though this expedition was not a very remarkable one in itself," says Robertson, "it deserves to be noticed as it led to discoveries of the utmost importance." For the same reason we must mention the voyage of Diego d'Ocampo, who being charged to sail round Cuba, was the first to ascertain the fact that it was a large island, Columbus having

always regarded it as part of the continent. Two years later Juan Diaz de Solis and Vincent Pinzon, sailing southwards towards the equinoctial line, advanced as far as the 40° of south latitude, and found, to their surprise, that the continent extended on their right hand even to this immense distance. They landed several times, and took formal possession of the country, but could not found any colonies there, on account of the small resources they had at their command. The principal result of this voyage was the more exact knowledge which it gave of the extent of this part of the globe.

Alonzo de Ojeda, whose adventures we have narrated above, was the first to think of founding a colony on the mainland; although he had no means of his own, his courage and enterprising spirit soon gained him associates, who furnished him with the funds needed for carrying out his plans.

With the same object Diego de Nicuessa, a rich colonist of Hispaniola, organized an expedition in 1509. King Ferdinand, who was always lavish of encouragements which cost little, gave both Ojeda and Nicuessa honorable titles and patents of nobility, but not a single coin. He also divided the newly-discovered continent into two governments, of which one was to extend from Cape *La Vela* to the Gulf of Darien, and the other from the Gulf of Darien to Cape *Gracias a Dios*. The first was given to Ojeda, the second to Nicuessa. These two "conquistadores" had to deal with a population far less easy to manage than that of the Antilles. Determined to resist to the utmost the invasion of their country, they adopted means of resistance hitherto unknown to the Spaniards. Thus the strife became deadly. In a single engagement seventy of Ojeda's companions fell under the arrows of the savages, fearful weapons steeped in "curare," so fatal a poison that the slightest wound was followed by death. Nicuessa on his side, had much difficulty in defending himself, and in spite of two considerable reinforcements from Cuba, the greater number of his followers perished during the year from wounds, fatigue, privations, or sickness. The survivors founded the small colony of Santa Maria el Antigua upon the Gulf of Darien, and placed it under the command of Balboa.

Before we speak of Balboa's wonderful expedition, we must notice the discovery of a country that forms the most northerly side of that arc, cut so deeply into the continent, and which bears the name of the Gulf of Mexico. In 1502 Juan Ponce de Leon, a member of one of the oldest families in Spain, had arrived in Hispaniola with Ovando. He had assisted in its subjugation, and in 1508 had conquered the island of San Juan de Porto Rico. Having learnt from the Indians that there existed a fountain in the island of Bimini which possessed the miraculous power of restoring youth to all who drank of its waters, Ponce de Leon resolved to go in search of it. Infirmities must have been already creeping on him at fifty years of age, or he would scarcely have felt the need of trying this fountain. Ponce de Leon equipped three vessels at his own expense, and set out from St. Germain in Porto Rico on the first of March, 1512. He went first to the Lucayan Islands, which he searched in vain, and then to the Bahamas. If he did not succeed in finding the fountain of youth which he sought so credulously, at least he had the satisfaction of discovering an apparently fertile tract of country, which he named Florida, either from his landing there on Palm Sunday (Pâques-Fleuries), or perhaps from its delightful aspect. Such a discovery would have contented many a traveler, but Ponce de Leon went from one island to another, tasting the water of every stream that he met with, without the satisfaction of seeing his white hair again becoming black or his wrinkles disappearing. After spending six months in this fruitless search, he was tired of playing the dupe, so giving up the business he returned to Porto Rico on the 5th of October, leaving Perez de Ortubia and the pilot Antonio de Alaminos to continue the search. Père Charlevoix says, "He was the object of great ridicule when he returned in much suffering, and looking older than when he set out."

This voyage, so absurd in its motive but so fertile in its results, might well be considered to be simply imaginary, were it not vouched for by historians of such high repute as Peter Martyr, Oviedo, Herrera, and Garcilasso de la Vega.

Vasco Nuñez de Balboa, who was fifteen years younger than Ponce de Leon, had come to America with Bastidas

and had settled in Hispaniola. He was only anxious for a safe refuge from his numerous creditors, being, as were so many of his fellow countrymen, deeply in debt, in spite of the *repartimiento* of Indians which had been allotted to him. Unfortunately for Balboa a law had been passed forbidding any vessels bound for the mainland taking insolvent debtors on board, but his ingenuity was equal to this emergency, for he had himself rolled in an empty barrel to the vessel which was to carry Encisco to Darien. The chief of the expedition had no choice but to receive the brave adventurer who had joined him in this singular manner, and who never fled except from duns, as he soon proved on landing. The Spaniards, accustomed to find but little resistance from the natives of the Antilles, could not subjugate the fierce inhabitants of the mainland. On account of the dissensions that had arisen among themselves, they were obliged to take refuge at Santa Maria el Antigua, a settlement which Balboa, now elected commandant in place of Encisco, founded in Darien.

If the personal bravery of Balboa, or the ferocity of Leoncillo, his blood hound—who was more dreaded than twenty armed men and received the same pay as a soldier,—could have awed the Indians, Balboa would have also won their respect by his justice and comparative moderation, for he allowed no unnecessary cruelty. In the course of some years he collected a great mass of most useful information with regard to that El Dorado, that land of gold, which he was destined never to reach himself, but the acquisition of which he did much to facilitate for his successors.

It was in this way that he learnt the existence six suns away (six days' journey), of another sea, the Pacific Ocean, which washed the shores of Peru, a country where gold was found in large quantities. Balboa's character, which was as grand as those of Cortes and Pizarro, but who had not, as they, the time or opportunity to show the extraordinary qualities which he possessed, felt convinced that this information was most valuable, and that if he could carry out such a discovery, it would shed great luster on his name.

He assembled a body of 190 volunteers, all valiant soldiers, and like himself, accustomed to all the chances of

war, as well as acclimatized to the unhealthy effluvia of a marshy country, where fever, dysentery, and complaints of the liver were constantly present.

Though the Isthmus of Darien is only sixty miles in width, it is divided into two parts by a chain of high mountains; at the foot of these the alluvial soil is marvelously fertile, and the vegetation far more luxuriant than any European can imagine. It consists of an inextricable mass of tropical plants, creepers, and ferns, among trees of gigantic size which completely hide the sun, a truly virgin forest, interspersed here and there with patches of stagnant water, where live multitudes of birds, insects, and animals, never disturbed by the foot of man. A warm, moist atmosphere exists here which exhausts the strength and speedily saps the energy of any man, even the most robust.

With all these obstacles which Nature seemed to have rejoiced in placing in Balboa's path, there was yet another no less formidable, and this was the resistance which the savage inhabitants of this inhospitable shore would offer to his progress. Balboa set out without caring for the risk he ran in the event of the guides and native auxiliaries proving faithless; he was escorted by a thousand Indians as porters, and accompanied by a troop of those terrible bloodhounds which had acquired the taste for human flesh in Hispaniola.

Of the tribes that he met with on his route, some fled into the mountains carrying their provisions with them, and others, taking advantage of the difficulties the land presented, tried to fight. Balboa marching in the midst of his men, never sparing himself, sharing in their privations and rousing their courage, which would have failed more than once, was able to inspire them with so much enthusiasm for the object that was before them, that after twenty-five days of marching and fighting, they could see from the top of a mountain that vast Pacific Ocean, of which, four days later, Balboa, his drawn sword in one hand and the banner of Castile in the other, took possession in the name of the King of Spain. The part of the Pacific Ocean which he had reached is situated to the east of Panama, and still bears the name of the Gulf of San Miguel, given to it by Balboa. The information he ob-

tained from the neighboring caciques, whom he subjugated by force of arms, and from whom he obtained a considerable booty, agreed in every particular with what he had heard before he set out.

A vast empire lay to the south, they said, "so rich in gold, that even the commonest instruments were made of it," where the domestic animals were llamas that had been tamed and trained to carry heavy burdens, and whose appearance in the native drawings resembled that of the camel. These interesting details, and the great quantity of pearls offered to Balboa, confirmed him in his idea, that he must have reached the Asiatic countries described by Marco Polo, and that he could not be far from the empire of Cipango or Japan, of which the Venetian traveler had described the marvelous riches which were perpetually dazzling the eyes of these avaricious adventurers.

Balboa several times crossed the Isthmus of Darien, and always in some fresh direction. Humboldt might well say that this country was better known in the beginning of the sixteenth century than in his own day. Beyond this Balboa had launched some vessels built under his orders on the newly-discovered ocean, and he was preparing a formidable armament, with which he hoped to conquer Peru, when he was odiously and judicially murdered by the orders of Pedrarias Davila, the governor of Darien, who was jealous of the reputation Balboa had already gained, and of the glory which would doubtless recompense his bravery if he carried out the expedition which he had arranged. Thus the conquest of Peru was retarded by at least twenty-five years, owing to the culpable jealousy of a man whose name has acquired, by Balboa's assassination, almost as wretched a celebrity as that of Erostratus.

If we owe to Balboa the first authentic documents regarding Peru, another explorer was destined to furnish some not less important touching that vast Mexican Empire, which had extended its sway over almost the whole of Central America. In 1518, Juan de Grijalva had been placed in command of a flotilla, consisting of four vessels, armed by Diego Velasquez, the conqueror of Cuba, which were destined to collect information upon Yucatan, sighted the year before by Hernandez de Cordova. Grijalva, ac-

companied by the pilot Alaminos, who had made the voyage to Florida with Ponce de Leon, had two hundred men under his command; amongst the volunteers was Bernal Diaz del Castillo, the clever author of a very interesting history of the conquest of Mexico.

After thirteen days' sailing, Grijalva reached the Island of Cozumel on the coast of Yucatan, doubled the Cape of Cotoche, and entered the Bay of Campeachy. He disembarked on the 10th of May at Potonchan, of which the inhabitants defended the town and citadel vigorously, in spite of their astonishment at the vessels, which they took for some kind of marine monsters, and their fear of the pale-faced men who hurled thunderbolts. Fifty-seven Spaniards were killed in the engagement, and many were wounded. This warm reception did not encourage Grijalva to make any long stay amongst this warlike people. He set sail again after anchoring for four days, took a westerly course along the coast of Mexico, and on the 19th of May entered a river named by the natives the Tabasco, where he soon found himself surrounded by a fleet of fifty native boats filled with warriors ready for the conflict, but thanks to Grijalva's prudence and the amicable demonstrations which he made, peace was not disturbed.

"We made them understand," writes Bernal Diaz, "that we were the subjects of a powerful emperor called Don Carlos, and that it would be greatly to their advantage if they also would acknowledge him as their master. They replied that they had a sovereign already, and were at a loss to understand why we, who had only just arrived, and who knew so little of them, should offer them another king." This reply was scarcely that of a savage!

In exchange for some worthless European trinkets, the Spaniards obtained some Yucca bread, copal gum, pieces of gold worked into the shape of fishes or birds, and garments made of cotton, which had been woven in the country. As the natives who had been taken on board at Cape Cotoche did not perfectly understand the language spoken by the inhabitants of Tabasco, the stay here was but of short duration, and the ships again put to sea. They passed the mouth of the Rio Guatzacoalco, the snowy peaks of the San Martin mountains being seen in the distance, and they anchored at the mouth of a river which was called

Rio de las Banderas, from the number of white banners displayed by the natives to show their friendly feeling towards the new comers.

When Grijalva landed, he was received with the same honor as the Indians paid to their gods; they burnt copal incense before him, and laid at his feet more than 1,500 piastres' worth of small gold jewels, as well as green pearls and copper hatchets. After taking formal possession of the country, the Spaniards landed on an island called *Los Sacrificios* Island, from a sort of altar which they found there placed at the top of several steps, upon which lay the bodies of five Indians sacrificed since the preceding evening; their bodies were cut open, their hearts torn out, and both legs and arms cut off. Leaving this revolting spectacle, they went to another small island, which received the name of San Juan, being discovered on St. John's Day; to this they added the word Culua, which they heard used by the natives of these shores. But Culua was the ancient name for Mexico, and this Island of San-Juan de Culua is now known as St. John d'Ulloa.

Grijalva put all the gold which he had collected on board one of the ships and despatched it to Cuba, while he continued his exploration of the coast, discovered the Sierras of Tusta and Tuspa, and collected a large amount of useful information regarding this populous country; on arriving at the *Rio Panuco,* he was attacked by a flotilla of native vessels, and had much difficulty in defending himself against their attacks.

This expedition was nearly over, for provisions were running short, and the vessels were in a very bad state, the volunteers were many of them sick and wounded, and even had they been in good health their numbers were too small to make it safe to leave them among these warlike people, even under the shelter of fortifications. Besides, the leaders of the expedition no longer acted in concert, so after repairing the largest of the vessels in the Rio Tonala, where Bernal Diaz boasts of having sown the first orange-pips which were ever brought to Mexico, the Spaniards set out for Santiago in Cuba, where they arrived on the 15th of November, after a cruise of seven months.

The results obtained from this voyage were considerable. For the first time the long line of coast which forms

the peninsula of Yucatan, the Bay of Campeachy, and the base of the Gulf of Mexico, had been explored continuously from cape to cape. Not only had it been proved beyond doubt that Yucatan was not an island as they had believed, but much and reliable information had been collected with regard to the existence of the rich and powerful empire of Mexico. The explorers had been much struck with the marks of a more advanced civilization than that existing in the Antilles, with the superiority of the architecture, the skillful cultivation of the land, the fine texture of the cotton garments, and the delicacy of finish of the golden ornaments worn by the Indians. All this combined to increase the thirst for riches among the Spaniards of Cuba, and to urge them on like modern Argonauts to the conquest of this new golden fleece. Cortez and Pizarro led armies to the conquest of the lands which Grijalva and Balboa had discovered.

CHAPTER II

THE FIRST VOYAGE ROUND THE WORLD

No one as yet was aware of the immense size of the continent discovered by Christopher Columbus. Still was sought perseveringly on the coast of America—which was thought to be a collection of several islands—the famous strait which should lead at once to the Pacific Ocean and to those Spice Islands the possession of which would have made the fortune of Spain. While Cortereal and Cabot were seeking for it in the Atlantic Ocean, and Cortès in the furthest part of the Gulf of California, while Pizarro was coasting along Peru, and Valdivia was conquering Chili, the solution of this problem was found by a Portuguese in the service of Spain, Ferdinand de Magellan.

The son of a nobleman, Ferdinand de Magellan was born either at Oporto, at Lisbon, at Villa de Sabrossa, or at Villa de Figueiro, it is not actually known which; the date of his birth is unknown, but it took place towards the end of the fifteenth century. He had been brought up in the house of King John II., where he received as complete an education as could then be given him. After having made mathematics and navigation his special study—for at this time in Portugal there was an irresistible current which

drew the whole country towards maritime expeditions and discoveries—Magellan early embraced a maritime career, and embarked in 1505 with Almeida, who was on his way to the Indies. He took part in the sacking of Quiloa, and in all the events of that campaign. The following year he accompanied Vaz Pereira to Sofala; then, on returning to the Malabar coast, we find him assisting Albuquerque at the taking of Malacca, and bearing himself on that occasion with equal prudence and bravery. He took part in the expedition sent by Albuquerque about 1510, to seek for the famous Spice Islands, under the command of Antonio de Abreu and of Francisco Serrao, which discovered Banda, Amboyna, Ternate, and Tidor. During this time Magellan had landed at the Malaysian Islands, distant 1,800 miles from Malacca, and in the Archipelago of the Moluccas he had obtained the circumstantial information which gave birth in his mind to the idea of the voyage which he was destined to accomplish later on.

On his return to Portugal, Magellan obtained leave, though not without difficulty, to search through the royal archives. He soon became certain that the Moluccas were situated in the hemisphere which the bull of demarcation adopted at Tordesillas by the kings of Spain and Portugal, and confirmed in 1494 by Pope Alexander VI., had given to Spain.

In virtue of this line of demarcation, which was destined to give rise to so many impassioned debates, all the countries situated at 360 miles west of the meridian of the Cape de Verd Islands were to belong to Spain, and all those lying to the east of the same meridian to Portugal. Magellan was of too active a nature to remain long without again taking service; he went next to fight in Africa at Azamor, a town in Morocco, where he received a slight wound in his knee, but one which by injuring a nerve made him lame for the remainder of his life, and obliged him to return to Portugal. Conscious of the superiority which his theoretical and practical knowledge and his services had earned for him above the herd of courtiers, Magellan naturally felt more keenly than another would have done the unjust treatment he received from Emmanuel with regard to certain complaints laid by the people of Azamor against the Portuguese officers. King Emmanuel's prejudices soon

changed to a real dislike. It showed itself by the outrageous imputation that Magellan was pretending to suffer from a wound which was really of no consequence and was completely cured, that he might escape from accusations which he could not refute. Such an assertion was a serious matter for the honor of Magellan, so susceptible and suspicious; he thereupon came to a desperate determination which corresponded moreover with the greatness of the insult which he had received. That no one might be ignorant of it, he caused it to be legally set forth that he renounced his rights as a Portuguese citizen, and changed his nationality, and he then took out letters of naturalization in Spain. This was to proclaim, as solemnly as could possibly be done, that he intended to be looked upon as a subject of the crown of Castile, to which henceforward he would consecrate his services and his whole life. This was a serious determination, as we can see, which no one blamed, and which even the most severe historians, such as Barros and Faria y Sousa, have excused.

At the same time as Magellan, the licentiate Rey Faleiro left Lisbon with his brother Francisco and a merchant named Christovam de Haro; the former was a man deeply versed in cosmographical knowledge, and had equally with Magellan fallen under Emmanuel's displeasure. Faleiro had entered into a treaty of partnership with Magellan to reach the Moluccas by a new way, but one which was not otherwise specified, and which remained Magellan's secret. As soon as they arrived in Spain, (1517), the two partners submitted their project to Charles V., who accepted it in principle; but there remained the always delicate question touching the means for putting it into execution. Happily, Magellan found in Juan de Aranda, the factor of the Chamber of Commerce, an enthusiastic partisan of his theories, and one who promised to exert all his influence to make the enterprise a success. He had an interview accordingly with the high Chancellor, the Cardinal and Bishop of Burgos, Fonseca. He set forth with such skill the great advantage that Spain would derive from the discovery of a route leading to the very center of the spice production, and the great prejudice which it would cause to the trade of Portugal, that an agreement was signed on the 22nd of March, 1518. The Emperor undertook to pay all the ex-

penses of the expedition on condition that the greater part of the profits should belong to him.

But Magellan had still many obstacles to surmount before taking to the sea. In the first place there were the remonstrances of the Portuguese ambassador, Alvaro de Costa, who, seeing that his endeavors were in vain, even tried to compass the assassination of Magellan, so says Faria y Sousa. Then he encountered the ill-will of the employés of the *Casa de contratacion* at Seville, who were jealous of a stranger being entrusted with the command of such an important expedition, and envious of the least token of favor which had been accorded to Magellan and Rey Faleiro, who had been named commanders of the order of St. James. Charles V. had thus given his consent by a public act, which seemed to be irrevocable. They tried, however, to make the Emperor alter his decision by organizing, on the twenty-second of October, 1518, a disturbance paid for with Portuguese gold. It broke out on the pretext that Magellan, who had just had one of his ships drawn on shore for repairs and painting, had decorated it with the Portuguese arms. This last attempt failed miserably, and three statutes of the 30th of March, and 6th and 30th of April, fixed the composition of the crews and named the staff; while a final official document dated from Barcelona the 26th of July, 1519, confided the sole command of the expedition to Magellan.

What had meanwhile been happening to Rey Faleiro? We cannot exactly say. But this man, who had up to this time been treated on the same footing as Magellan, and who had perhaps first conceived the project, now found himself quite excluded from the command of the expedition, after some dissensions of which the cause is unknown. His health, already shaken, received a last shock from this affront, and poor Rey Faleiro, who had become almost childish, having returned to Portugal to see his family, was arrested there, and only released upon the intercession of Charles V. At last, after having sworn fidelity and homage to the crown of Castile, Magellan received in his turn the oath of his officers and sailors, and left the port of San Lucar de Barrameda on the morning of the 10th of August, 1519.

But before entering on the narrative of this memorable

campaign, we must give a few particulars of the man who has left us the most complete account of it, Francesco Antonio Pigafetta. Born at Venice about 1491, of a noble family, Pigafetta formed part of the suite of the Ambassador Francesco Chiericalco, sent by Leo X. to Charles V., who was then at Barcelona. His attention was no doubt aroused by the noise which the preparations for the expedition made at that time in Spain, and he obtained permission to take part in the voyage. This volunteer proved an excellent recruit, for he showed himself in every respect as faithful and intelligent an observer as he was a brave and courageous companion. He was wounded at the battle of Zebu, fighting beside Magellan, which prevented him from being present at the banquet during which so many of his companions were destined to lose their lives. As to his narrative, with the exception of some exaggerations of detail according to the taste of that time, it is exact, and the greater part of the descriptions which we owe to him have been verified by modern travelers.

Upon his return to San Lucar on the 6th of September, 1522, after having fulfilled the vow which he had made to go barefoot to return thanks to *Nuesta Señora de la Victoria,* the Lombard (as they called him on board the *Victoria*), presented to Charles V., then at Valladolid, a complete journal of the voyage. When he returned to Italy, by means of the original as well as some of the supplementary notes he wrote a longer narrative of the expedition, at the request of Pope Clement VII. and of Villiers de l'Isle Adam, grand-master of the Knights of Malta. He sent copies of his work to several distinguished personages, and notably to Louisa of Savoy, mother of Francis I. But she not understanding, so thinks Harrisse, the very learned author of the *Bibliotheca Americana Vetustissima,* the kind of patois used by Pigafetta, and which resembles a mixture of Italian, Venetian, and Spanish, employed a certain Jacques Antoine Fabre to translate it into French.

Pigafetta died at Venice about 1534, in a house in the Rue de la Lune, which in 1800 was still to be seen, and which bore the well-known device, "No rose without a thorn."

At the same time, not wishing to confine ourselves to Pigafetta's narrative entirely, we have compared and com-

pleted it with that of Maximilian Transylvain, secretary to Charles V., of which there is an Italian translation in Ramusio's valuable collection.

The fleet of Magellan consisted of the *Trinidad,* of 120 tons' burden, which carried the flag of the commander of the expedition; the *Sant'-Antonio,* also of 120 tons, commanded by Juan de Carthagena, the second in rank, the *person joined with* Magellan, says the official document; the *Concepcion,* of 90 tons, commanded by Gaspar de Quesada; the famous *Victoria,* of 85 tons, commanded by Luis de Mendoza; and lastly the *Santiago,* of 75 tons, commanded by Joao Serrâo, called by the Spaniards Serrano.

Four of these captains and nearly all the pilots were Portuguese. Barbosa and Gomez on board the *Trinidad,* Luis Alfonzo de Goez and Vasco Gallego on the *Victoria,* Serrâo, Joao Lopez de Carvalho on the *Concepcion,* Joao Rodriguez de Mœfrapil on the *Sant'-Antonio,* and Joao Serrâo on the *Santiago,* with twenty-five sailors, formed a total of thirty-three Portuguese out of the whole body of 237 individuals whose names have all been handed down to us, and amongst whom are found a considerable number of Frenchmen.

Of the officers whose names have been mentioned, it is to be remembered that Duarte Barbosa was brother-in-law to Magellan and that Estavam Gomez, who, by returning to Seville on the 6th of May, 1521, did not participate in the conclusion of this memorable voyage, was afterwards sent by Charles V. to seek for the northwest passage, and in 1524 sailed along the coast of America from Florida to Rhode Island, and perhaps as far as Cape Cod.

Nothing could have been better arranged than this expedition, for the equipment of which the whole resources of the nautical science of that epoch had been taxed. At the moment of departure Magellan gave his last orders to his pilots and captains, and the code of signals which were to ensure unanimity in maneuvers, and prevent a possible separation.

On Monday morning, the 10th August, 1519, the fleet weighed anchor and sailed down the Guadalquiver as far as San Lucar de Barrameda, which forms the port of Seville, where the victualing of the ships was completed, and it was the 20th of September before they were really off.

Six days afterwards the fleet anchored at Teneriffe in the Canary Archipelago, where both wood and water were taken on board. It was on leaving this island that the first symptoms appeared of the misunderstanding between Magellan and Juan de Carthagena which was to prove so fatal to the expedition. The latter claimed the right to be informed by the commander-in-chief of the route which he intended to take, a claim which was at once rejected by Magellan, who declared that he was not called upon to give any explanation to his subordinate.

After having passed between the Cape de Verd Islands and Africa, the ships reached the shores of Sierra Leone, where contrary winds and dead calms detained the fleet for twenty days.

A painful incident now occurred. During a council which was held on board the flagship, a sharp dispute arose, and Juan de Carthagena, who affected to treat the Captain-general with contempt, having answered him with pride and insolence, Magellan felt obliged to arrest him with his own hand, and to have him put in the stocks, an instrument made of two pieces of wood placed one upon the other and pierced with holes, in which were placed the legs of the sailor who was to be punished. The other captains remonstrated loudly with Magellan against a punishment which was too degrading for a superior officer, and Carthagena in consequence was simply put under arrest, and guarded by one of the captains. To the calms now succeeded rain, tempest, and heavy squalls, which obliged the vessels to lie to. During these storms the navigators several times witnessed an electric phenomenon of which the cause was not then known, but which they considered an undoubted sign of the protection of heaven, and which even at the present day is known by the name of St. Elmo's fire. Once past the equinoctial line, they steered for Brazil, where, on the 13th of December, 1519, the fleet cast anchor in the magnificent port of Santa Lucia, now known under the name of Rio Janeiro. This was not, however, the first time that this bay had been seen by Europeans, as was long believed. Since the year 1511 it had been known under the name of *Bahia do Cabo Frio*. It had been visited also, four years before Magellan's arrival, by Pero Lopez, and seems to have been frequented since the commencement of the

sixteenth century by mariners from Dieppe, who, inheritors of the passion for adventurous navigation of their ancestors the Northmen, roamed over the world, and founded small establishments or factories in all directions. Here the Spanish expedition procured cheaply, in exchange for looking-glasses, pieces of ribbon, scissors, hawks' bells or fish hooks, a quantity of provisions, amongst which Pigafetta mentions pineapples, sugar-cane, sweet potatoes, fowls, and the flesh of the Anta, which is thought to be the tapir.

The account given in the same narrative of the manners of the inhabitants is sufficiently curious to be repeated. "The Brazilians are not Christians," he says, "but no more are they idolators, for they worship nothing; natural instinct is their only law." This is an interesting fact, and a singular avowal for an Italian of the sixteenth century, deeply imbued with superstition. "These natives live to a great age, they go entirely naked, and sleep in cotton nets called hammocks, suspended by the two ends to beams. As to their boats, called canoes, each is hollowed out of the single trunk of a tree and can hold as many as forty men. They are anthropophagi (cannibals), but only on special occasions, and scarcely ever eat any but their enemies taken in battle. Their dress of ceremony is a kind of vest made of paroquets' feathers, woven together, and so arranged that the large wing and tail-feathers form a sort of girdle round their loins, which gives them a whimsical and ridiculous appearance."

After remaining thirteen days in this place, the squadron continued its route to the south, coasting along the shore, and arrived at 34° 40′ of south latitude in a country where flowed a large river of fresh water. It was the La Plata. The natives, called Charruas, were so frightened at the sight of the vessels that they hastily took refuge in the interior of the country, carrying with them all their valuables, and it was impossible to overtake any of them. It was in this country that four years previously, Juan Diaz de Solis had been massacred by a tribe of Charruas, armed with that terrible engine which is still in use at the present day among the *gauchos* of the Argentine Republic, the *bolas*, which are metal balls fastened to the two ends of a long leather thong, called a *lasso*.

A little below the estuary of the La Plata, once thought

to be an arm of the sea opening into the Pacific, the flotilla anchored at Port Desire. Here they obtained an ample supply of penguins for the crews of the five vessels—a bird which did not make a very delicious meal. Then they anchored in 49° 30′ in a beautiful harbor, where Magellan resolved to winter, and which received the name of St. Julian's Bay. The Spaniards had been two months there, when one day they perceived a man who seemed to them to be of gigantic stature. At sight of them he began dancing and singing and throwing dust upon his head. This was a Patagonian, who allowed himself without resistance to be taken on board the vessels. He showed the greatest surprise at all he saw around him, but nothing astonished him so much as a large steel mirror which was presented to him. "The giant, who had not the least idea of the use of this piece of furniture, and who, no doubt, now saw his own face for the first time, drew back in such terror, that he threw to the ground four of our people who were behind him." He was taken back on shore loaded with presents, and the kind welcome which he had received induced eighteen of his companions, thirteen women and five men, to come on board. They were tall, and had broad faces, painted red except the eyes, which were encircled with yellow; their hair was whitened with lime, they were wrapped in enormous fur cloaks, and wore those large leather boots from which was given to them the name of Large-feet or Patagonians. Their stature was not, however, so gigantic as it appeared to our simple narrator, for it varies from five feet, ten inches to five feet, eight inches, being somewhat above the middle height among Europeans. For arms they had a short massive bow, and arrows made of reed, of which the point was formed of a sharp pebble.

The captain, to retain two of these savages whom he wished to take to Europe, used a stratagem, which we should characterize as hateful in the present day, but which had nothing revolting about it for the sixteenth century, when Indians and negroes were universally considered to be a kind of brute beasts. Magellan loaded these Indians with presents, and when he saw them embarrassed with the quantity, he offered to each of them one of those iron rings used for chaining captives. They would have desired to carry them away, for they valued iron above every-

thing, but their hands were full. It was then proposed to fasten the rings to their legs, to which they agreed without suspicion. The sailors then closed the rings, so that the savages found themselves in fetters. Nothing can give an idea of their fury when they discovered this stratagem, worthy rather of savages than of civilized men. The capture of others was attempted, but in vain, and in the chase one of the Spaniards was wounded by a poisoned arrow, which caused his death almost instantaneously. Intrepid hunters, these people wander about perpetually in pursuit of guanaquis and other game; they are endowed with such wonderful voracity "that what would suffice for the nourishment of twenty sailors, can scarcely satisfy seven or eight of them." Magellan, foreseeing that the stay here was likely to be prolonged, and perceiving that the country only presented meager resources, gave orders to economize the provisions, and to put the men on fixed rations, that they might not experience too great privations before the spring, when they might reach a country where there was more game. But the Spaniards, discontented at the sterility of the place, and at the length and rigor of the winter, began to murmur. This land seemed to stretch southwards as far as the Antarctic pole, they said; there did not seem to be any strait; already several had died from the privations they had endured; lastly it was time to return to Spain, if the commander did not wish to see all his men perish in this place.

Magellan, fully resolved to die, or else to bring the enterprise he commanded to a successful issue, replied that the Emperor had assigned him the course which the voyage was to take, and he neither could nor would depart from it under any pretext, and that in consequence, he should go straight forward to the end of this land, or until he met with some strait. As to provisions, if they found them insufficient, his men might add to their rations the produce of their fishing or hunting. Magellan thought that so firm a declaration would impose silence on the malcontents, and that he would hear no more of privations, from which he suffered equally with his crews. He deceived himself completely. Certain of the captains, and Juan de Carthagena in particular, were interested in causing a revolt to break out. These rebels therefore began by reminding the Span-

iards of their old animosity against the Portuguese. The captain-general being one of the latter nation, had never, according to them, tendered a whole-hearted allegiance to the Spanish flag. In order to be able to return to his own country and to gain pardon for what he had done wrong, he wished to commit some heinous crime, and nothing could be more advantageous to Portugal than the destruction of this fine fleet. Instead of leading them to the Archipelago of the Moluccas, of the riches of which he had boasted to them, he wished to take them into frozen regions, the dwelling place of eternal snow, where he could easily manage that they should all perish; then with the help of the Portuguese on board the squadron, he would take back to his own country the vessels which he had seized.

Such were the reports and accusations that the partisans of Juan de Carthagena, Luis de Mendoza, and Gaspar de Quesada had disseminated among the sailors, when on Palm Sunday, the 1st of April, 1520, Magellan summoned the captains, officers, and pilots, to hear mass on board his vessel and to dine with him afterwards. Alvaro de la Mesquita, a cousin of the captain-general, accepted this invitation with Antonio de Coca and his officers, but neither Mendoza nor Quesada, nor Juan de Carthagena, who was Quesada's prisoner, appeared. The next night the malcontents boarded the *Sant'-Antonio* with thirty of the men of the *Concepcion,* and desired to have La Mesquita given up to them. The pilot, Juan de Eliorraga, while defending his captain, received four stabs from a poniard in the arm. Quesada cried out at the same time, "You will see that this fool will make our business fail." The three vessels, the *Concepcion, Sant'-Antonio,* and *Santiago,* fell without difficulty into the hands of the rebels, who reckoned more than one accomplice among the crews. In spite of this success, the three captains did not dare openly to attack the commander-in-chief, and sent to him some proposals for a reconciliation. Magellan ordered them to come on board the *Trinidad* to confer with him; but this they stoutly refused to do, whereupon Magellan, having no further need of caution, had the boat seized which had brought him this answer, and choosing six strong and brave men from amongst his crew, he sent them on board the *Victoria* under the command of the *alguazil* Espinosa. He carried a letter from

Magellan to Mendoza enjoining him to come on board the *Trinidad,* and when Mendoza smiled in a scornful manner, Espinosa stabbed him in the throat with a poniard, while a sailor struck him on the head with a cutlass. While these events were taking place, another boat, laden with fifteen armed men, came alongside the *Victoria,* and took possession of her without any resistance from the sailors, surprised by the rapidity of the action. On the next day, the 3rd of April, the two other rebel vessels were taken, not however without bloodshed. Mendoza's body was divided into quarters, while a clerk read in a loud voice the sentence that blasted his memory. Three days afterwards, Quesada was beheaded and cut in pieces by his own servant, who undertook this sad task to save his own life. As to Carthagena, the righ rank which the royal edict had conferred upon him in the expedition saved him from death, but with Gomez de la Reina, the chaplain, he was left behind on the shore, where some months afterwards he was found by Estevam Gomez. Forty sailors convicted of rebellion were pardoned because their services were considered indispensable. After this severe lesson Magellan might well hope that the mutinous spirit was really subdued.

When the temperature became milder the anchors were weighed; the squadron put to sea on the 24th of August, following the coast, and carefully exploring all the gulfs to find that strait which had been so persistently sought. At the level of Cape St. Croix, one of the vessels, the *Santiago,* was lost on the rocks during a violent gale from the east. Happily both the men and merchandise on board were saved, and they succeeded also in taking from the wrecked vessel the rigging and appurtenances of the ship, which they divided among the four remaining vessels.

At last on the 21st of October according to Pigafetta, the 27th of November according to Maximilian Transylvain, the flotilla penetrated by a narrow entrance into a gulf, at the bottom of which a strait opened, which as they soon saw passed into the sea to the south. First they called this the Strait of the *Eleven Thousand Virgins,* because this was the day dedicated to them. On each side of the strait rose high land covered with snow, on which they saw numerous fires, especially to the left, but they were unable to obtain any communication with the natives. After

sailing for twenty-two days across this succession of narrow inlets and arms of the sea, in some places three miles wide, in some twelve, which extends for a distance of 440 miles and has received the name of Magellan's Strait, the flotilla emerged upon a sea of immense extent and great depth. The rejoicings were general when at last the sailors found themselves at the long-wished-for end of their efforts. Henceforward the route was open and Magellan's clever conjectures were realized.

Nothing is more extraordinary than the navigation of Magellan upon this ocean, which he called Pacific, because for four months no storm assailed him upon it. The privations endured by the crews during this long space of time were excessive. The biscuit was nothing more than dust mixed with worms, while the water had become bad and gave out an unbearable smell. The sailors were obliged to eat mice and sawdust to prevent themselves from dying of hunger, and to gnaw all the leather that it was possible to find. As it was easy to foresee under these circumstances, the crews were decimated by scurvy. Nineteen men died, and thirty were seized with violent pains in their arms and legs, which caused prolonged sufferings. At last, after having sailed over more than 12,000 miles without meeting with a single island, in a sea where so many and such populous archipelagoes were destined to be discovered, the fleet came upon two desert and sterile islands, called for that reason the Unfortunate Islands, but of which the position is indicated in much too contradictory a manner, for it to be possible to recognize them.

In 12° north latitude and 146° longitude, on Wednesday, the 6th of March, the navigators discovered successively three islands, at which they greatly desired to stop to recruit, and take in fresh provisions; but the islanders who came on board stole so many things, without the possibility of preventing them, that the sailors were obliged to give up the idea of remaining there. The natives contrived even to carry off a long boat. Magellan, indignant at such daring, made a descent with forty armed men, burned some houses and boats, and killed seven men. These islanders had neither chief, king, nor religion. Their heads were covered with palm leaf hats, they wore beards, and their hair descended to their waists. Generally of an olive tint,

they thought they embellished themselves by coloring their teeth black and red, while their bodies were anointed with cocoanut oil, no doubt in order to protect themselves from the heat of the sun. Their canoes of curious construction, carried a very large matting sail, which might have easily capsized the boat if the precaution had not been taken of giving a more stable trim by means of a long piece of wood kept at a certain distance by two poles; this is what is called the "balance." These islanders were very industrious, but had a singular aptitude for stealing, which has gained for their country the name of the *Islands of Thieves* (Ladrone Islands).

On the 16th of March was seen, at about 900 miles from the Ladrones, some high ground; this was soon discovered to be an island which now goes by the name of Samar Island. There Magellan, resolving to give his exhausted crews some rest, caused two tents to be pitched on land for the use of the sick. The natives quickly brought bananas, palm wine, cocoanuts, and fish; for which mirrors, combs, bells, and other similar trifles were offered in exchange. The cocoanut, a tree which is valuable beyond all others, supplied these natives with their bread, wine, oil, and vinegar, and besides they obtained from it their clothing and the necessary wood for building and roofing in their huts.

The natives soon became familiar with the Spaniards, and told them that their archipelago produced cloves, cinnamon, pepper, nutmegs, ginger, maize or Indian corn, and that even gold was found there. Magellan gave this archipelago the name of the St. Lazarus Islands, afterwards changed to that of the Philippines from the name of Philip of Austria, son of Charles V.

When they were a little restored, the Spaniards put to sea again, in order to explore the archipelago. They saw in succession the islands of Cenalo, Huinaugan, Ibusson, and Abarien, as well as another island called Massava, of which the king Colambu could make himself understood by a slave, a native of Sumatra, whom Magellan had taken to Europe from India, and who by his knowledge of Malay rendered signal service in several instances. The king came on board with six or eight of his principal subjects. He brought with him presents for the captain-general, and in exchange he received a vest of red and yellow cloth, made

in Turkish fashion, and a cap of fine scarlet, while mirrors and knives were given to the members of his suite. The Spaniards showed him all their firearms and fired some shots from the cannon in his presence, at which he was much terrified. "Then Magellan caused one of our number to be fully armed," says Pigafetta, "and ordered three men to give him blows with the sword and stiletto, to show the king that nothing could wound a man armed in this manner, which surprised him greatly, and turning to the interpreter he said to the captain through him, 'that a man thus armed, could fight against a hundred.' 'Yes,' replied the interpreter, in the name of the commandant, 'and each of the three vessels carries 200 men armed in this manner.'" The king, astonished by all that he had seen, took leave of the captain, begging him to send two of his men with him, to let them see something of the island. Pigafetta was chosen, and was much satisfied with the welcome that he received. The king told him "that in this island they found pieces of gold as large as nuts, and even eggs, mixed with the earth which they passed through a sieve to find them; all his vessels and even some of the ornaments of his house were of this metal. He was very neatly dressed, according to the custom of the country, and was the finest man that I have seen among these people. His black hair fell upon his shoulders; a silk veil covered his head, and he wore two rings in his ears. From his waist to his knees, he was covered with a cotton cloth embroidered in silk. On each of his teeth there were three spots of gold, arranged in such a manner that one would have said all his teeth were fastened together with this metal. He was perfumed with storax and benzoin. His skin was painted, but its natural tint was olive."

On Easter Day, the Europeans went on shore to celebrate mass in a kind of little church which they had constructed on the sea shore with sails and branches of trees. An altar had been set up, and during the whole time that the religious ceremony lasted, the king with a large concourse of people, listened in silence and imitated all the motions of the Spaniards. Then a cross having been planted on a hill with great solemnity, they weighed anchor and made for the port of Zebu, as being the best for revictualing the vessels and trading. They arrived there on

Sunday, the 7th of April. Magellan sent one of his officers on shore at once with the interpreter, as ambassador to the king of Zebu. The envoy explained that the chief of the squadron was under the orders of the greatest king in the world. The object of the voyage, he added, was the wish to pay him a visit, and at the same time to take in some fresh provisions in exchange for merchandise, and then to go to the Molucca Islands. Such were the motives which caused them to tarry in a country where they came as friends.

"They are welcome," replied the king; "but if they intend to trade they should pay a duty to which all vessels are subject that enter my port, as did, not four days since, a junk from Siam, which came to seek for slaves and gold, to which a Moorish merchant who has remained in this country can testify."

The Spaniard replied that his master was too great a king to submit to such an unreasonable demand. They had come with pacific intentions; but if war were declared, it would be seen with whom they had to deal.

The king of Zebu, warned by the Moorish merchant, of the power of those who stood before him, and whom he took for Portuguese, at length consented to forego his claims. Moreover the king of Massava, who had continued to serve as pilot to the Spaniards, so altered the inclinations of his brother sovereign, that the Spaniards obtained the exclusive privilege of trading in the island, and a loyal friendship was sealed between the king of Zebu and Magellan by an exchange of blood which each drew from his right arm.

From this moment, provisions were brought and cordial relations established. The nephew of the king came with a numerous suite to visit Magellan on board his ship, and the latter took this opportunity to relate to his visitors the wonderful history of the creation of the world, and of the redemption of the human race, and to invite him and his people to become converts to Christianity. They showed no repugnance to being baptized, and on the 14th of April the kings of Zebu and Massava, and the Moorish merchant, with 500 men and as many women received baptism. But what was only a fashion at first, for it cannot be said that the natives knew the religion which they embraced or were

persuaded of its truth, became a real frenzy, after a wonderful cure had been effected by Magellan. Having learnt that the father of the king had been ill for two years and was on the point of death, the captain-general promised, that if he consented to be baptized and the natives would burn their idols, he would find himself cured. "He added that he was so convinced of what he said," relates Pigafetta —for it is as well to quote the author verbatim in such a matter—"that he agreed to lose his head if what he promised did not happen immediately. We then made a procession, with all possible pomp, from the place where we were to the sick man's house, whom we found really in a very sad state in that he could neither speak nor move. We baptized him with two of his wives and ten daughters. The captain asked him directly after his baptism how he found himself, and he suddenly replied that thanks to our Lord he was well. We were all witnesses of this miracle. The captain above all rendered thanks to God for it. He gave the prince a refreshing drink, and continued to send him some of it every day till he was quite restored. On the fifth day the invalid found himself quite cured and got up. His first care was to have burned, in the presence of the king and all the people, an idol for which he had great veneration, and which some old women guarded carefully in his house. He also caused some temples which stood on the sea shore, and in which the people assembled to eat the meat consecrated to their old divinities, to be thrown down. All the inhabitants applauded these acts, and proposed themselves to go and destroy all the idols, even those which were in use in the king's house, crying at the same time '*Vive la Castille!*' in honor of the king of Spain."

Near to the Island of Zebu is another island called Matan which had two chiefs, one of whom had recognized the authority of Spain, while the other having energetically resisted it, Magellan resolved to impose it upon him by force. On Friday, the 26th of April, three long boats left for the Island of Matan containing sixty men wearing cuirasses and helmets, and armed with muskets; and thirty *balangais* bearing the king of Zebu, his son-in-law, and a number of warriors.

The Spaniards waited for day and then to the number of forty-nine leaped into the water, for the boats could not

approach the land on account of the rocks and shallow water. More than 1,500 natives awaited them, and at once threw themselves upon them, and attacked them in three troops, both in front and flank. The musketeers and the crossbow-men fired on the multitude of warriors from a distance, without doing them much harm, they being protected by their bucklers. The Spaniards, assailed by stones, arrows, javelins, and lances, and overwhelmed by numbers, set fire to some huts to disperse and intimidate the natives. But these, made more furious by the sight of the fire, redoubled their efforts, and pressed the Spaniards on all sides, who had the greatest difficulty in resisting them, when a sad event took place which compromised the issue of the combat. The natives were not slow in remarking that all the blows which they directed towards those parts of their enemies' bodies which were protected by armor, caused no wounds; they set themselves therefore to hurl their arrows and javelins against the lower part of the body, which was undefended. Magellan, wounded in the leg by a poisoned arrow, gave the order for retreat, which begun in good order, soon changed into such a flight, that seven or eight Spaniards alone remained at his side. With much difficulty they kept moving backwards, fighting as they went, in order to reach the boats. They were already knee-deep in the water when several islanders rushed all together upon Magellan, who, wounded in the arm, was unable to draw his sword; they gave him such a saber-cut upon his leg that he immediately fell down in the water, where he was speedily despatched. His remaining companions, and among them Pigafetta, everyone of whom had been hit, hastily regained the boats. Thus perished the illustrious Magellan on the 27th of April, 1521. "He was adorned with every virtue," says Pigafetta, "and ever exhibited an unshaken constancy in the midst of the greatest adversity. At sea he always condemned himself to greater privations than the rest of his crew. Better versed than anyone else in the knowledge of nautical charts, he was perfect in the art of navigation, as he proved by making the tour of the world, which none before him had ventured to do." Pigafetta's funeral eulogy, though a little hyperbolical, is not untrue in the main. Magellan had need of singular constancy and per-

severance to penetrate, despite the fears of his companions, into regions peopled by the superstitious spirit of the time with fantastic dangers. Peculiar nautical science was also necessary to achieve the discovery at the extremity of that long coast of the strait which so justly bears his name. He was obliged to give unceasing attention to avoid all untoward accidents while exploring those unknown parts without any exact instruments. That one of the vessels was lost must be imputed to pride and a spirit of revolt in her own captain, more than to any incapacity or want of caution in the captain-general. Let us add with our enthusiastic narrator, "The glory of Magellan will survive his death."

Duarte Barbosa, Magellan's brother-in-law, and Juan Serrano were elected commanders by the Spaniards, who were destined to meet with further catastrophes. The slave who had acted as interpreter up to this time had been slightly wounded during the battle. From the time of his master's death he had kept aloof, not rendering any further services to the Spaniards, and remaining extended upon his mat. After some rather sharp reproofs from Barbosa, who told him that his master's death did not make him a free man, he disappeared all at once. He was gone to the newly-baptized king, to whom he declared that if he could allure the Spaniards into some trap and then kill them, he would make himself master of all their provisions and merchandise. Serrano, Barbosa, and twenty-seven Spaniards were accordingly invited to a solemn assembly to receive the presents destined by the king of Zebu for the emperor; during the banquet they were attacked unexpectedly, and were all massacred except Serrano, who was led bound to the sea shore, where he besought his companions to ransom him, for if they did not he would be murdered. But Juan de Carvalho and the others, fearing that the insurrection would become general, and that they might be attacked during the negotiations by a numerous fleet which they would not be able to resist, turned a deaf ear to the unfortunate Serrano's supplications. The ships set sail and reached the Island of Bohol, which was not far distant.

When there, thinking that their numbers were too much reduced to navigate three vessels, they burned the *Concep-*

cion, after having transshipped all that was most precious on board the other vessels. Then, after having coasted along the Island of Panilongon they stopped at Butuan, which forms part of Mindanao, a magnificent island, with numerous ports, and rivers abounding in fish, to the north-west of which lies the Island of Luzon, the most considerable of the Archipelago. The ships touched also at Paloan, where they found pigs, goats, fowls, different kinds of bananas, cocoa-nuts, sugar-canes, and rice, with which they provisioned the ships. This was for them, as Pigafetta expresses it, "a promised land." Among the things which he thought worthy of notice, the Italian traveler mentions the cocks kept by the natives for fighting; a passion which after so many years is still deeply-rooted amongst the population of the whole Philippine Archipelago. From Paloan, the Spaniards next went to the Island of Borneo, the center of Malay civilization. From that time they had no longer to deal with poverty-stricken people, but with a rich population, who received them with magnificence. Their reception by the rajah is sufficiently curious to warrant a few words being devoted to it. At the landing-place they found two elephants with silk trappings, who bore the strangers to the house of the governor of the town, while twelve men carried the presents which were to be offered to the rajah. From the governor's house where they slept to the palace of the king, the streets were kept by armed men. Upon descending from their elephants the Spaniards were admitted to a room filled with courtiers. At the end of this room opened another smaller room, hung with cloth of gold, in which were 300 men of the king's guard armed with poniards. Through a door they could then see the rajah, sitting by a table with a little child, chewing betel-nut. Behind him there were only some women.

Etiquette required that the petition to be made must pass in succession through the mouths of three nobles, each of higher rank than the last, before being transmitted, by means of a hollow cane placed in a hole in the wall, to one of the principal officers, who submitted it to the king. Then there was an exchange of presents, after which the Spanish Ambassadors were conducted back to their vessels with the same ceremony as on their arrival. The capital

is built on piles in the sea; so that when the tide rises, the women who sell provisions go about the town in boats. On the 29th of July more than 100 canoes surrounded the two vessels, whilst at the same time some junks weighed anchor to approach them more nearly. The Spaniards, fearing to be treacherously attacked, took the initiative and fired off their artillery, which killed a number of people in the canoes, upon which the king excused himself, saying that his fleet had not been directed against them, but against the Gentiles with whom the Mussulmen had daily combats.

On leaving Borneo the travelers sought for a suitable spot in which to repair their vessels, which were in such great need of it that the men were not less than forty-two days over the work. "The oddest things which I have found in this island," says Pigafetta, "are the trees of which all the leaves are animated. These leaves resemble those of the mulberry, but are not so long; the stalk is short and pointed, and near the stalk on both sides there are two feet. If you touch the leaves, they escape; but when crushed no blood comes from them. I have kept one of them in a box for nine days; when I opened the box, the leaf was walking about in it; I believe they must live upon air." These very curious animals are well known at the present day, and are commonly called leaf-flies (*mouches-feuille*); they are of a gray-brown, which makes them more easily mistaken for dead leaves, which they exactly resemble in appearance.

It was while in these parts that the Spanish expedition, which during Magellan's life had preserved its scientific character, began perceptibly to become piratical. Thus, on several occasions, junks were seized upon, and their crews forced by their Spanish captors to pay large ransoms.

The ships next passed by the Archipelago of the Sooloo Islands, the haunt of Malay pirates, who have even now only lately submitted to civilized arms; then by Mindanao, which had been already visited, for it was known that the eagerly sought-for Moluccas must be in its neighborhood, whether more or less remote. At last, after having seen a number of islands, of which the names would not convey much idea to us, on Wednesday, the 6th of November, the Spaniards discovered the Archipelago, about which the Portuguese had related such terrifying fables, and two

days later they landed at Tidor. Thus the object of the voyage was attained.

The king came to meet the Spaniards, and invited them to go on board his canoe. "He was seated under a silk parasol which covered him entirely. In front of him were placed one of his sons who carried the royal scepter, two men who had each a golden vase full of water for washing the king's hands, and two others holding small gilt boxes filled with betel." Then the Spaniards made the king come on board the vessels, where they showed him much respect, at the same time loading him and those who accompanied him with presents, which seemed to them very precious. "This king is a Moor, that is to say, an Arab," Pigafetta affirms; "he is nearly forty-five years of age, tolerably well made, and with a fine physiognomy. His clothing consisted of a very fine shirt, the cuffs of which were embroidered in gold; drapery descended from his waist to his feet; a silk veil (no doubt a turban) covered his head, and upon this veil there was a garland of flowers. His name is Rajah-sultan Manzor."

The next day, in a long interview which he had with the Spaniards, Manzor declared his intention of placing himself with the Islands of Ternate and Tidor under the protection of the king of Spain.

A Portuguese named Lorosa had been long settled in the Moluccas, and to him the Spaniards forwarded a letter, in the hope that he would betray his country and attach himself to Spain. They obtained the most curious information from him with regard to the expeditions which the king of Portugal had despatched to the Cape of Good Hope, to the Rio de la Plata and to the Moluccas; but from various circumstances these latter expeditions had not been able to take place. He himself had been sixteen years in this Archipelago; the Portuguese had been installed there for ten years, but upon this fact they preserved the most complete silence. When Lorosa saw the Spaniards making their preparations for departure, he came on board with his wife and his goods to return to Europe. On the 12th of November all the merchandise destined for barter was landed, it being chiefly derived from the four junks which had been seized in Borneo. Certainly the Spaniards traded to great advantage, but nevertheless not to so great an ex-

tent as they might have done, for they were in haste to return to Spain. Some vessels from Gilolo and Batchian came also to trade with them, and a few days later they received a considerable stock of cloves from the king of Tidor. This king invited them to a great banquet which he said it was his custom to give when a vessel or junk was loaded with the first cloves. But the Spaniards, remembering what had happened to them in the Philippines, refused the invitation while presenting compliments and excuses to the king. When their cargo was completed, they set sail. Scarcely had the *Trinidad* put to sea before it was perceived that she had a serious leak, and the return to Tidor as fast as possible was unavoidable. The skillful divers whom the king placed at the disposal of the Spaniards, were unable to discover the hole, and it became necessary to partly unload the ship to make the necessary repairs. The sailors who were on board the *Victoria* would not wait for their companions, and the ship's officers seeing clearly that the *Trinidad* would not be fit for the voyage to Spain, decided that she should go to Darien, where her valuable cargo would be discharged and transported across the Isthmus to the Atlantic, where a vessel would be sent to fetch it. But neither the unfortunate vessel nor her crew was destined ever to return to Spain.

The *Trinidad,* commanded by the Alguazil Gonzales Gomez de Espinosa, who had Juan de Carvalho as pilot, was in so bad a state that after leaving Tidor, she was obliged to anchor at Ternate, in the port of Talangomi, where her crew consisting of seventeen men was immediately imprisoned by the Portuguese. The only reply given to Espinosa's remonstrances was a threat to hang him to the yard of a vessel; and the unfortunate Alguazil, after having been transferred to Cochin, was sent to Lisbon, where for seven months he remained shut up in the prison of the Limoeiro with two Spaniards, the sole survivors of the crew of the *Trinidad.*

As to the *Victoria,* she left Tidor richly laden under the command of Juan Sebástian del Cano, who, after having been simply a pilot on board one of Magellan's ships, had taken the command of the *Concepcion* on the 27th of April, 1521, and who succeeded to Juan Lopez de Carvalho, when the latter was superseded in his command for incapacity.

The crew of the *Victoria* was composed of only fifty-three Europeans and thirteen Indians. Fifty-four Europeans remained at Tidor on board the *Trinidad*.

After passing amidst the islands of Caioan, Laigoma, Sico, Giofi, Cafi, Laboan, Toliman, Batchian, Mata, and Batu, the *Victoria* left this latter island to the west, and steering west-southwest, stopped during the night at the island of Xulla or Zulla. At thirty miles from thence the Spaniards anchored at Booro, (the Boero of Bougainville), where the ship was revictualed. They stopped 105 miles further on, at Banda, where mace and nutmegs are found, then at Solor, where a great trade in white sandal-wood is carried on. They spent a fortnight there to repair their ship, which had suffered much, and there they laid in an ample provision of wax and pepper; then they anchored at Timor, where they could only obtain provisions by retaining by stratagem the chief of the village and his son, who had come on board the ship. This island was frequented by junks from Luzon, and by the "praos," from Malacca and Java, which traded largely there in sandal-wood and pepper. A little further on the Spaniards touched at Java, where, as it appears, *suttee* was practiced at this time, as it has been in India until quite recently.

Among the stories which Pigafetta relates, without entirely believing them, is one which is most curious. It concerns a gigantic bird the Epyornis, of which the bones and the enormous eggs were discovered in Madagascar, about the year 1850. It is an instance proving the caution needed before rejecting as fictitious many apparently fabulous legends, but which on examination may prove to possess a substratum of truth. "To the north of Greater Java," says Pigafetta, "in the gulf of China, there is a very large tree called *campanganghi* inhabited by certain birds called *garula*, which are so large and strong that they can bear away a buffalo and even an elephant, and carry it as they fly to the place where the tree *pusathaer* is." This legend has been current ever since the ninth century, among the Persians and Arabs, and this bird plays a wonderful part in Arabian tales under the name of the *roc*. It is not surprising, therefore, that Pigafetta found an analogous tradition amongs the Malays.

After leaving greater Java, the *Victoria* rounded the peninsula of Malacca, which had been subjugated to Portugal by the great Albuquerque ten years before. When once the *Victoria* had left the shores of Malacca, Sebastian del Cano took great care to avoid the coast of Zanguebar, where the Portuguese had been established since the beginning of the century. He kept to the open sea as far as 42° south latitude, and for nine weeks he was obliged to keep the sails furled, on account of the constant west and northwest winds, which ended in a fearful storm. To keep to this course required great perseverance on the part of the captain, with a settled desire on his part to carry his enterprise to a successful issue. The vessel had several leaks, and a number of the sailors demanded an anchorage at Mozambique, for the provisions which were not salted having become bad, the crew had only rice and water for food and drink. At last on the 6th of May, the Cape of Tempests was doubled and a favorable issue to the voyage might be hoped for. Nevertheless, many vexatious accidents still awaited the navigator. In two months, twenty-one men, Europeans and Indians, died from privations, and if on the 9th of July they had not landed at Santiago, one of the Cape de Verd Islands, the whole crew would have died of hunger. As this archipelago belonged to Portugal, the sailors took care to say that they came from America, and carefully concealed the route which they had discovered. But one of the sailors having had the imprudence to say that the *Victoria* was the only vessel of Magellan's squadron which had returned to Europe, the Portuguese immediately seized the crew of a long-boat, and prepared to attack the Spanish vessel. However, Del Cano on board his vessel was watching all the movements of the Portuguese, and suspecting, by the preparations which he saw, that there was an intention of seizing the *Victoria,* he set sail, leaving thirteen men of his crew in the hands of the Portuguese. Maximilian Transylvain assigns a different motive from the one given by Pigafetta, for the anchorage at the Cape de Verd Islands. He asserts that the fatigued state of the crew, who were reduced by privations, and who in spite of everything had not ceased to work the pumps, had decided the captain to stop and buy some slaves to aid them in this work. Having no money

the Spaniards would have paid with some of their spices, which would have opened the eyes of the Portuguese.

"To see if our journals were correctly kept," says Pigafetta, "we inquired on shore what day of the week it was. They replied that it was Thursday, which surprised us, because according to our journals it was as yet only Wednesday. We could not be persuaded that we had made the mistake of a day; I was more astonished myself than the others were, because having always been sufficiently well to keep my journal, I had uninterruptedly marked the days of the week, and the course of the months. We learned afterwards, that there was no error in our calculation, for having always traveled towards the west, following the course of the sun, and having returned to the same point, we must have gained twenty-four hours upon those who had remained stationary; one has only need of reflection to be convinced of this fact."

Sebastian del Cano rapidly made the coast of Africa, and on the 6th of September entered the Bay of San Lucar de Barrameda, with a crew of seventeen men, almost all of whom were ill. Two days later he anchored before the mole at Seville, after having accomplished a complete circuit of the world.

As soon as he arrived, Sebastian del Cano went to Valladolid, where the court was, and received from Charles V. the welcome which was merited after so many difficulties had been courageously overcome. The bold mariner received permission to take as his armorial bearings, a globe with this motto, *Primus circumdedisti me,* and he also received a pension of 500 ducats.

The rich freight of the *Victoria* decided the Emperor to send a second fleet to the Moluccas. The supreme command of it was not, however, given to Sebastian del Cano; it was reserved for the commander Garcia de Loaisa, whose only claim to it was his grand name. However, after the death of the chief of the expedition, which happened as soon as the fleet had passed the Strait of Magellan, Del Cano found himself invested with the command, but he did not hold it long, for he died six days afterwards. As for the ship *Victoria,* she was long preserved in the port of Seville, but in spite of all the care that was taken of her, she at length fell to pieces from old age.

CHAPTER III

THE POLAR EXPEDITIONS AND THE SEARCH FOR THE NORTH-WEST PASSAGE

PYTHEAS had opened up the road to the north to the Scandinavians by discovering Iceland (the famous Thule) and the *Cronian* Ocean, of which the mud, the shallow water, and the ice render the navigation dangerous, and where the nights are as light as twilight. The traditions of the voyages undertaken by the ancients to the Orkneys, the Faröe Islands, and even to Iceland, were treasured up among the Irish monks, who were learned men, and themselves bold mariners, as their successive establishments in these archipelagoes clearly prove. They were also the pilots of the Northmen, a name given generally to the Scandinavian pirates, both Danish and Norwegian, who rendered themselves so formidable to the whole of Europe during the Middle Ages. But if all the information that we owe to the ancients, both Greeks and Romans, with regard to these hyperborean countries be extremely vague and so to speak fabulous, it is not so with that which concerns the adventurous enterprises of the "Men of the North." The Sagas, as the Icelandic and Danish songs are called, are extremely precise, and the numerous data which we owe to them are daily confirmed by the archæological discoveries made in America, Greenland, Iceland, Norway, and Denmark. This is a source of valuable information which was long unknown and unexplored, and of which we owe the revelation to the learned Dane, C. C. Rafn, who has furnished us with authentic facts of the greatest interests bearing on the pre-Columbian discovery of America.

Norway was poor and encumbered with population. Hence arose the necessity for a permanent emigration, which should allow a considerable portion of the inhabitants to seek in more favored regions the nourishment which a frozen soil denied them. When they had found some country rich enough to yield them an abundant spoil, they then returned to their own land, and set out the following spring accompanied by all those who could be enticed either by the love of lucre, the desire for an easy life, or by the thirst for strife. Intrepid hunters and fishermen, accustomed to a dangerous navigation, between the continent and the mass of islands which border it and ap-

pear to defend it against the assaults of the ocean, and across the narrow, deep *fiords,* which seem as though they were cut into the soil itself by some gigantic sword, they set out in those oak vessels, the sight of which made the people tremble who lived on the shores of the North Sea and British Channel. Sometimes decked, these vessels, long or short, large or small, were usually terminated in front by a spur of enormous size, above which the prow sometimes rose to a great height, taking the form of an S. The *hällristningar,* for so they call the graphic representations so often met with on the rocks of Sweden and Norway, enable us to picture to ourselves these swift vessels, which could carry a considerable crew. Such was the *Long-serpent* of Olaf Tryggvason, which had thirty-two benches of rowers and held ninety men, Canute's vessel, which carried sixty, and the two vessels of Olaf the Saint, which carried sometimes 200 men. The Sea-kings, as they often called these adventurers, lived on the ocean, never settling on shore, passing from the pillage of a castle to the burning of an abbey, devastating the coast of France, ascending rivers, especially the Seine, as far as Paris, sailing over the Mediterranean as far as Constantinople, establishing themselves later in Sicily, and leaving traces of their incursions or their sojourn in all the regions of the known world.

Piracy, far from being, as at the present day, an act falling under the ban of the law, was not only encouraged in that barbarous or half-civilized society, but was celebrated in the songs of the *Skalds,* who reserved their most enthusiastic eulogies for celebrating chivalrous struggles, adventurous privateering, and all exhibitions of strength. From the eighth century, these formidable sea-rovers frequented the groups of the Orkney, the Hebrides, the Shetland, and Faröe Islands, where they met with the Irish monks, who had settled themselves there nearly a century earlier, to instruct the idolatrous population.

In 861 a Norwegian pirate, named Naddod, was carried by a storm towards an island covered with snow, which he named Snoland (land of snow), a name changed later to that of Iceland (land of ice). There again the Northmen found the Irish monks under the name of Papis, in the cantons of Papeya and Papili.

Ingolf installed himself some years afterwards in the country, and founded Reijkiavik. In 885 the triumph of Harold Haarfager, who had just subjugated the whole of Norway by force of arms, brought a considerable number of malcontents to Iceland. They established there the republican form of government, which had just been overthrown in their own country, and which subsisted till 1261, the epoch when Iceland passed under the dominion of the kings of Norway.

When established in Iceland, these bold fellows, lovers of adventure and of long hunts in pursuit of seals and walrus, retained their wandering habits and pursued their bold plans in the west, where only three years after the arrival of Ingolf, Guunbjorn discovered the snowy peaks of the mountains of Greenland. Five years later, Eric the Red, banished from Iceland for murder, rediscovered the land in latitude 64° north, of which Guunbjorn had caught a glimpse. The sterility of this ice-bound coast made him decide to seek a milder climate with a more open country, and one producing more game, in the south. So he rounded Cape Farewell at the extremity of Greenland, established himself on the west coast, and built some vast dwellings for himself and his companions, of which M. Jorgensen has discovered the ruins. This country was probably worthy at that period of the name of Green-Land (Groenland) which the Northmen gave to it, but the annual and great increase of the glaciers, has rendered it since that epoch a land of desolation.

Eric returned to Iceland to seek his friends, and in the same year that he returned to Brattahalida (for so he called his settlement), fourteen vessels laden with emigrants came to join him. It was a veritable exodus. These events took place in the year 1000. As quickly as the resources of the country allowed of it, the population of Greenland increased, and in 1121, Gardar, the capital of the country, became the seat of a bishopric, which existed until after the discovery of the Antilles by Christopher Columbus.

In 986 Bjarn Heriulfson, who had come from Norway to Iceland to spend the winter with his father, learnt that the latter had joined Eric the Red in Greenland. Without hesitation, the young man again put to sea, seeking at haphazard for a country of which he did not even know the

exact situation, and was swept by currents to coasts which we think must have been those of Newfoundland or Labrador.

He ended, however, by reaching Greenland, where Eric, the powerful Norwegian *jarl*, reproached him for not having examined with more care countries of which he owed his knowledge to a happy accident of the sea.

Eric had sent his son Leif to the Norwegian court, so close at this time was the connection between the metropolis and the colonies. The king, who had been converted to Christianity, had just despatched a mission to Iceland charged to overthrow the worship of Odin. He committed to Leif's care some priests who were to instruct the Greenlanders; but scarcely had the young adventurer returned to his own country, when he left the holy men to work out the accomplishment of their difficult task and hearing of the discovery made by Bjarn, he fitted out his vessels and went to seek for the lands which had been only imperfectly seen. He landed first on a desolate and stony plain, to which he gave the name of *Helluland*, and which we have no hesitation in recognizing as Newfoundland, and afterwards on a flat sandy shore behind which rose an immense screen of dark forests, cheered by the songs of innumerable birds. A third time he put to sea and steering towards the south he arrived at the Bay of Rhode Island, where the mild climate and the river teeming with salmon induced him to settle, and where he constructed vast buildings of planks, which he called *Leifsbudir* (Leif's house). Then he sent some of his companions to explore the country, and they returned with the good news that the wild vine grows in the country, to which it owes the name of *Vinland*. In the spring of the year 1001, Leif, having laded his ship with skins, grapes, wood, and other productions of the country, set out for Greenland; he had made the valuable observation that the shortest day in *Vinland* lasted nine hours, which places the site of Leifsbudir at 41° 24′ 10″. This fortunate voyage and the salvage of a Norwegian vessel carrying fifteen men, gained for Leif the surname of the Fortunate.

This expedition made a great stir, and the account of the wonders of the country in which Leif had settled, induced his brother Thorvald to set out with thirty men. After passing the winter at Leifsbudir, Thorvald explored the

coasts to the south, returning in the autumn to Vinland and in the following year, 1004, he sailed along the coast to the north of Leifsbudir. During this return voyage, the Northmen met with the Esquimaux for the first time, and without any provocation, slaughtered them without mercy. The following night they found themselves all at once surrounded by a numerous flotilla of *Kayacs,* from which came a cloud of arrows. Thorvald alone, the chief of the expedition, was mortally wounded; he was buried by his companions on a promontory, to which they gave the name of the promontory of the Cross.

Now, in the Gulf of Boston in the eighteenth century, a tomb of masonry was discovered, in which, with the bones, was found a sword-hilt of iron. The Indians not being acquainted with this metal, it could not be one of their skeletons; it was not either, the remains of one of the Europeans who had landed after the fifteenth century, for their swords had not this very characteristic form. This tomb has been thought to be that of a Scandinavian, and we venture to say, that of Thorvald, son of Eric the Red.

In the spring of 1007, three vessels carrying 160 men and some cattle, left Eriksfjord; the object in view was the foundation of a permanent colony. The emigrants after sighting Helluland, Markland, and Vinland, landed on an island, upon which they constructed some barracks and began the work of cultivation. But they must either have laid their plans badly, or have been wanting in foresight, for the winter found them without provisions, and they suffered cruelly from hunger. They had, however, the good sense to regain the continent, where in comparative ease, they could await the end of the winter.

At the beginning of 1008, they set out to seek for Leifsbudir, and settled themselves at Mount-Hope Bay, on the opposite shore to the old settlement of Leif. There, for the first time, some intercourse was held with the natives, called *Skrellings* in the sagas, and whom, from the manner in which they are portrayed, it is easy to recognize as Esquimaux. The first meeting was peaceable, and barter was carried on with them until the day when the desire of the Esquimaux to acquire iron hatchets, always prudently refused them by the Northmen, drove them to acts of aggression, which decided the new comers, after three years of

residence, to return to their own country, which they did without leaving behind them any lasting trace of their stay in the country.

Having now said a few words upon the travels and settlements of the Northmen in Labrador, Vinland, and the more southern countries, we must return to the north. The colonists first founded in the neighborhood of Cape Farewell, had not been slow in stretching along the western coast, which at this period was infinitely less desolate than it is at the present day, as far as northern latitudes, which were not again reached until our own day. Thus at this time they caught seals, walrus, and whales in the bay of Disco; there were 190 towns counted then in Westerbygd and eighty-six in Esterbygd, while at the present day, there are far fewer Danish settlements on these icy shores. These towns were probably only inconsiderable groups of those houses in stone and wood, of which so many ruins have been found from Cape Farewell, as far as Upernavik in about 72° 50′. At the same time numerous runic inscriptions, which have now been deciphered, have given a degree of absolute certainty to facts so long unknown. But how many of these vestiges of the past still remain to be discovered! how many of these valuable evidences of the bravery and spirit of enterprise of the Scandinavian race are forever buried under the glaciers!

We have also obtained evidence that Christianity had been brought into America, and especially into Greenland. To this country, according to the instructions of Pope Gregory IV., there were pastoral visits made to strengthen the newly-converted Northmen in the faith, and to evangelize the Esquimaux and the Indian tribes. Besides this, M. Riant in 1865, has proved incontrovertibly that the Crusades were preached in Greenland in the bishopric of Gardar, as well as in the *islands and neighboring lands*, and that up to 1418, Greenland paid to the Holy See tithes and St. Peter's pence, which for that year consisted of 2,600 pounds of walrus tusks.

The Norwegian colonies owe their downfall and ruin to various causes: to the very rapid extension of the glaciers, —Hayes has proved that the glacier of Friar John moves at the rate of about thirty-three yards annually;—to the bad policy of the mother country, which prevented the recruit-

ing of the colonies; to the black plague, which decimated the population of Greenland from 1347 to 1351; lastly, to the depredations of the pirates, who ravaged these already enfeebled countries in 1418, and in whom some have thought they recognized certain inhabitants of the Orkney and Faröe Islands, of which we are now about to speak.

One of the companions of William the Conqueror, named Saint-Clair or Sinclair, not thinking that the portion of the conquered country allotted to him was proportioned to his merits, went to try his luck in Scotland, where he was not long in rising to fortune and honors. In the latter half of the fourteenth century, the Orkney Islands passed into the hands of his descendants.

About 1390, a certain Nicolo Zeno, a member of one of the most ancient and noble Venetian families, who had fitted out a vessel at his own expense, to visit England and Flanders as a matter of curiosity, was wrecked in the archipelago of the Orkneys whither he had been driven by a storm. He was about to be massacred by the inhabitants, when the Earl, Henry Sinclair, took him under his protection. The history of this wreck, and the adventures and discoveries which followed it, published in the collection of Ramusio had been written by Antonio Zeno, says Clements Markham, the learned geographer, in his "Threshold of the Unknown Region." Unfortunately one of his descendants named Nicolo Zeno, born in 1515, when a boy, not knowing the value of these papers, tore them up, "but some of the letters surviving, he was able from them subsequently to compile the narrative as we now have it, and which was printed in Venice in 1558. There was also found in the palace an old map, rotten with age, illustrative of his voyages. Of this he made a copy, unluckily supplying from his own reading of the narrative what he thought was requisite for its illustration. By doing this in a blundering way, unaided by the geographical knowledge which enables us to see where he goes astray, he threw the whole of the geography which he derived from the narrative into the most lamentable confusion, while those parts of the map which are not thus sophisticated, and which are consequently original, present an accuracy far in advance by many generations of the geography even of Nicolo Zeno's time, and confirm in a notable manner the site of the old Greenland

colony. In these facts we have not only the solution of all the discussions which have arisen on the subject, but the most indisputable proof of the authenticity of the narrative; for it is clear that Nicolo Zeno, junior, could not himself have been the ingenious concocter of a story the straightforward truth of which he could thus ignorantly distort upon the face of the map."

The name of Zichmni, in which writers of the present day, and chief among them Mr. H. Major, who has rescued these facts from the domain of fable, recognize the name of Sinclair—appears to be in fact only applicable to this earl of the Orkneys.

At this time the seas of the north of Europe were infected by Scandinavian pirates. Sinclair, who had recognized in Zeno a clever mariner, attached him to himself, and with him conquered the country of Frisland, the haunt of pirates, who ravaged all the north of Scotland. In the maps at the end of the fifteenth and beginning of the sixteenth century this name is applied to the archipelago of the Faröe Islands, a reasonable indication, for Buache has recognized in the present names of the harbors and islands of this archipelago a considerable number of those given by Zeno; finally the facts which we owe to the Venetian navigator about the waters,—abounding in fish and dangerous from shallows,—which divide this archipelago, are still true at the present day.

Satisfied with his position, Zeno wrote to his brother Antonio to come and join him. While Sinclair was conquering the Faröe Islands, the Norwegian pirates desolated the Shetland Islands, then called Eastland. Nicolo set sail to give them battle, but was himself obliged to flee before their fleet, much more numerous than his own, and to take refuge on a small island on the coast of Iceland.

After wintering in this place Zeno must have landed the following year on the eastern coast of Greenland at 69° north latitude, in a place "where was a monastery of the order of preaching friars, and a church dedicated to St. Thomas. The cells were warmed by a natural spring of hot water, which the monks used to prepare their food and to bake their bread. The monks had also gardens covered over in the winter season, and warmed by the same means, so that they were able to produce flowers, fruits, and herbs

as well as if they had lived in a mild climate." There would seem to be some confirmation of these narratives in the fact that between the years 1828-1830 a captain of the Danish navy met with a population of 600 individuals at 69° north latitude, of a purely European type.

But these adventurous travels in countries of which the climate was so different from that of Venice, proved fatal to Zeno, who died in a short time after his return to Frisland.

An old sailor, who had returned with the Venetian, and who said he had been for many long years a prisoner in the countries of the extreme west, gave to Sinclair such precise and tempting details of the fertility and extent of these regions, that the latter resolved to attempt their conquest with Antonio Zeno who had rejoined his brother. But the inhabitants showed themselves everywhere so hostile, and opposed such resistance to the strangers landing, that Sinclair after a long and dangerous voyage was obliged to return to Frisland.

These are all the details that have been left to us, and they make us deeply regret the loss of those that Antonio should have furnished in his letters to his father Carlo, on the subject of the countries which Forster and Malto-Brun have thought may be identified with Newfoundland.

Joao Vaz Cortereal was the natural son of a gentleman named Vasco Annes da Costa, who had received the sobriquet of Cortereal from the King of Portugal, on account of the magnificence of his house and followers. Devoted like so many other gentlemen of this period to seafaring adventure, Joao Vaz had carried off in Galicia a young girl named Maria de Abarca, who became his wife. After having been gentleman-usher to the Infante Don Fernando, he was sent by the king to the North Atlantic, with Alvaro Martins Homem. The two navigators saw an island known from this time by the name of *Terra dos Bacalhaos*—the land of cod-fish—which must really have been Newfoundland. The date of this discovery is approximately fixed by the fact that on their return, they landed at Terceira and finding the captainship vacant by the death of Jacome de Bruges, they went to ask for it from the Infanta Doña Brites, the widow of the Infante Don Fernando; she bestowed it upon them on condition that they

would divide it between them, a fact which is confirmed by a deed of gift dated from Evora the 2d of April, 1464. Though one cannot guarantee the authenticity of this discovery of America, it is nevertheless an ascertained fact that Cortereal's voyage must have been signalized by some extraordinary event; donations of such importance as this were only made to those who had rendered some great service to the crown.

When Vaz Cortereal was settled at Terceira from 1490 to 1497, he caused a fine palace to be built in the town of Angra, where he lived with his three children. His third son, Gaspard, after having been in the service of King Emmanuel, when the latter was only Duke de Beja had felt himself attracted while still young to the enterprises of discovery which had rendered his father illustrious. By an act dated from Cintra the 12th of March, 1500, King Emmanuel made a gift to Gaspard Cortereal of any islands or *terra firma* which he might discover, and the king added this valuable information, that "already and at other times he had sought for them on his own account and at his own expense."

For Gaspard Cortereal this was not his first essay. Probably, his researches may have been directed to the parts where his father had discovered the Island of Cod. At his own expense, although with the assistance of the king, Gaspard Cortereal fitted out two vessels at the commencement of the summer of 1500, and after having touched at Terceira, he sailed towards the northwest. His first discovery was of a land of which the fertile and verdant aspect seems to have charmed him. This was Canada. He saw there a great river bearing ice along with it on its course—the St. Lawrence—which some of his companions mistook for an arm of the sea, and to which he gave the name of *Rio Nevado*. "Its volume is so considerable that it is not probable that this country is an island, besides, it must be completely covered with a very thick coating of snow to produce such a stream of water."

The houses in this country were of wood and covered with skins and furs. The inhabitants were unacquainted with iron, but used swords made of sharpened stones, and their arrows were tipped with fish-bones or stones. Tall and well-made, their faces and bodies were painted in differ-

ent colors according to taste, they wore golden and copper bracelets, and dressed themselves in garments of fur. Cortereal pursued his voyage and arrived at the Cape of *Bacalhaos,* "fishes which are found in such great quantities upon this coast that they hinder the advance of the caravels." Then he followed the shore for a stretch of 600 miles, from 56° to 60°, or even more, naming the islands, the rivers, and the gulfs that he met with, as is proved by *Terra do Labrador, Bahia de Conceicao,* etc., and landing and holding intercourse with the natives. Severe cold, and a veritable river of gigantic blocks of ice prevented the expedition from going farther north, and it returned to Portugal bringing back with it fifty-seven natives. The very year of his return, on the 15th of May, 1501, Gaspard Cortereal, in pursuance of an order of the 15th of April, received provisions, and left Lisbon in the hope of extending the field of his discoveries. But from this time he is never again mentioned. Michael Cortereal, his brother, who was the first gentleman usher to the king, then requested and obtained permission to go and seek his brother, and to pursue his enterprise. By an act of the 15th of January, 1502, a deed of gift conveyed to him the half of the terra firma and islands which his brother might have discovered. Setting out on the 10th of May of this year with three vessels, Michael Cortereal reached Newfoundland, where he divided his little squadron, so that each of the vessels might explore the coasts separately, while he fixed the place of rendezvous. But at the time fixed, he did not reappear, and the two other vessels, after waiting for him till the 20th of August, set out on their return to Portugal.

In 1503, the king sent two caravels to try to obtain news of the two brothers, but the search was in vain, and they returned without having acquired any information. When Vasco Annes, the last of the brothers Cortereal, who was captain and governor of the Islands of St. George and Terceira, and alcaide mor of the town of Tavilla, became acquainted with these sad events, he resolved to fit out a vessel at his own cost, and to go and search for his brothers. The king, however, would not allow him to go, fearing to lose the last of this race of good servants.

Upon the maps of this period, Canada is often indicated by the name of Terra dos Cortereales, a name which is

sometimes extended much further south, embracing a great part of North America.

All that concerns John and Sebastian Cabot has been until recently shrouded by a mist which is not even now completely dissipated. It is at least certain that John Cabot founded an important mercantile house at Bristol. His son Sebastian acquired an inclination for the sea, studied navigation, as far as it was then known, and made some excursions on the sea, to render himself as familiar with the practice of this art, as he already was with its theory. "For seven years past," says the Spanish Ambassador in a despatch of the 25th of July, 1498, speaking of an expedition commanded by Cabot, "the people of Bristol have fitted out two, three, or four caravels every year, to go in search of the Island of Brazil, and of the Seven Cities, according to the ideas of the Genoese." At this time the whole of Europe resounded with the fame of the discoveries of Columbus. "It awoke in me," says Sebastian Cabot, in a narrative preserved by Ramusio, "a great desire and a kind of ardor in my heart to do myself also something famous, and knowing by examining the globe, that if I sailed by the west wind I should reach India more rapidly, I at once made my project known to His Majesty, who was much satisfied with it." The king to whom Cabot addressed himself was the same Henry VII. who some years before had refused all support to Christopher Columbus. It is evident that he received with favor the project which John and Sebastian Cabot had just submitted to him; and though Sebastian, in the fragment which we have just quoted, attributes to himself alone all the honor of the project, it is not less true that his father was the promoter of the enterprise.

In 1497 John Cabot set out at the beginning of summer. After having sighted the *Terra Bona-vista,* as he called America, he followed the coast, perceiving to his great disappointment that it barred the road to the west. "Then, sailing along it to make sure if I could not find some passage, I could not perceive any, and having advanced as far as 56°, and seeing that at this point the land turned towards the east, I despaired of finding any passage, and I put about to examine the coast in this direction towards the equinoctial line. always with the same object of finding a passage to the Indies, and in the end, I reached the country

now called Florida, where as provisions were beginning to run short, I resolved to return to England." This narrative, of which we have given the commencement above, was related by Sebastian Cabot to Fracastor, forty or fifty years after the event. Also, is it not astonishing that Cabot mixes up in it two perfectly distinct voyages, one of 1494, and that of 1497? Let us add some reflections on this narrative. The first land seen was, without doubt, the North Cape, the northern extremity of the island of Cape Breton, and the island which is opposite to it is that of Prince Edward, long known by the name of St. John's Island. Cabot probably penetrated into the estuary of the St. Lawrence, which he took for an arm of the sea, near to the place where Quebec now stands, and coasted along the northern shore of the gulf, so that he did not see the coast of Labrador stretching away in the east. He took Newfoundland for an archipelago, and continued his course to the south, not doubtless, as far as Florida as he states himself, the time occupied by the voyage making it impossible that he can have descended so low, but as far as Chesapeake Bay. These were the countries which the Spaniards afterwards called "Terra de Estevam Gomez."

On the 3d of February, 1498, King Henry VII. signed at Westminster some new letters patent. He empowered John Cabot or his representative,—being duly authorized—to take in English ports six vessels of 200 tons' burden, and to procure all that should be required for their equipment, at the same price as if it were for the crown. He was allowed to take on board such master-mariners, pages, and other subjects as might of their own accord wish to go, and pass with him to the recently discovered land and islands. John Cabot bore the expense of the equipment of two vessels, and three others were fitted out at the cost of the merchants of Bristol.

In all probability it was death—a sudden and unexpected death—which prevented John Cabot from taking the command of this expedition. His son Sebastian then assumed the direction of the fleet, which carried 300 men and provisions for a year. After having sighted land at 45°, Sebastian Cabot followed the coast as far as 58°, perhaps even higher, but then it became so cold, and although it was the month of July, there was so much floating ice about,

that it would have been impossible to go farther northwards. The days were very long, and the nights excessively light, an interesting detail by which to fix the latitude reached, for we know that below the 60th parallel of latitude the longest days are eighteen hours. These various reasons made Sebastian Cabot decide to put about, and he touched at the Bacalhaos Islands, of which the inhabitants, who were clothed in the skins of animals, were armed with bow and arrows, lance, javelin, and wooden sword. The navigators here caught a great number of cod-fish; they were even so numerous, says an old narrative, that they hindered ships from advancing. After having sailed along the coast of America as far as 38°, Cabot set out for England, where he arrived at the beginning of autumn. This voyage had indeed a threefold object, that of discovery, commerce, and colonization, as is shown by the number of vessels which took part in it and the strength of the crews. Nevertheless it does not appear that Cabot landed anyone, or that he made any attempts at forming a settlement, either in Labrador, or in Hudson's Bay—which he was destined to explore more completely in 1517, in the reign of Henry VIII.—or even to the south of the Bacalhaos, known by the general name of Newfoundland. At the close of this expedition, which was almost entirely unproductive, we lose sight of Sebastian Cabot, if not completely, at least so as to be insufficiently informed about his deeds and voyages until 1517. The traveler Ojeda, whose various enterprises we have related above, had left Spain in the month of May, 1499. We know that in this voyage he met with an Englishman at Caquibaco, on the coast of America. Can this have been Cabot? Nothing has come to light to enable us to settle this point; but we may believe that Cabot did not remain idle, and that he would be likely to undertake some fresh expedition: what we do know is, that in spite of the solemn engagements that he had made with Cabot, the King of England granted certain privileges of trading in the countries which he had discovered, to the Portuguese and to the merchants of Bristol. This ungenerous manner of recognizing his services wounded the navigator, and decided him to accept the offers which had been made to him on different occasions, to enter the Spanish service. From the death of Vespucius, which happened in 1512, Cabot was the

navigator held in most renown. To attach him to himself, Ferdinand wrote on the 13th of September, 1512, to Lord Willoughby, commander in chief of the troops which had been transported to Italy, to treat with the Venetian navigator.

As soon as he arrived in Castille, Cabot received the rank of captain, by an edict dated the 20th of October, 1512, with a salary of 5,000 maravédis. Seville was fixed upon for his residence, until an opportunity might arise of turning his talents and experience to account. There was a plan on foot for his taking the command of a very important expedition, when Ferdinand the Catholic died, on the 23d of January, 1516. Cabot returned at once to England, having probably obtained leave of absence. Eden tells us that the following year Cabot was appointed with Sir Thomas Pert to the command of a fleet which was to reach China by the northwest. On the 11th of June, he was in Hudson's Bay at 67½° of latitude; the sea free from ice spread itself out before him so far that he reckoned upon success in his enterprise, when the faintheartedness of his companion, together with the cowardice and mutinous spirit of the crews, who refused to go any further, obliged him to return to England. In his *Theatrum orbis terrarum*, Ortelius traces the shape of Hudson's Bay as it really is; he even indicates at its northern extremity a strait leading northwards. How can the geographer have attained to such exactness? "Who," says Mr. Nicholls, "can have given him the information set forth in his map, if not Cabot?"

On his return to England, Cabot found the country ravaged by a horrible plague, which put a stop even to commercial transactions. Soon, either because the time of his leave had expired, or that he wished to escape from the pestilence, or that he was recalled to Spain, the Venetian navigator returned to that country. In 1518, on the 5th of February, Cabot was made pilot-major, with a salary which, added to that which he already had, made a total of 125,000 maravédis, say, 300 ducats. He did not actually exercise the functions of his office till Charles V. returned from England. His principal duty consisted in examining pilots, who were not allowed to go to the Indies until after having passed this examination.

This epoch was by no means favorable to great maritime expeditions. The struggle between France and Spain absorbed all the resources both in men and money, of these two countries—Cabot too, who seems to have adopted science for his fatherland, much more than any particular country, made some overtures to Contarini, the Ambassador of Venice, to take service on board the fleets of the Republic; but when the favorable answer of the Council of Ten arrived, he had other projects in his head, and did not carry his attempt any further.

In the month of April, 1524, Cabot presided at a conference of mariners and cosmographers, which met at Badajoz, to discuss the question whether the Moluccas belonged, according to the celebrated treaty of Tordesillas, to Spain or Portugal. On the 31st of May, it was decided that the Moluccas were within the Spanish waters, by 20°. Perhaps this resolution of the junta of which Cabot was president, and which again placed in the hands of Spain a great part of the spice trade, was not without its influence upon the resolutions of the council of the Indies. However this may be, in the month of September of the same year Cabot was authorized to take the command of three vessels of 100 tons, and a small caravel, carrying together 150 men, with the title of captain-general.

The declared aim of this voyage was to pass through the Strait of Magellan, carefully to explore the western coast of America, and to reach the Moluccas, where they would take in on their return a cargo of spices. The month of August, 1525, had been fixed upon as the date of departure, but the intrigues of Portugal succeeded in delaying it until April, 1526.

Different circumstances seem from this moment to have augured ill for the voyage. Cabot had only a nominal authority, and the association of merchants who had defrayed the expenses of the equipment not accepting him willingly as chief, had found means to oppose all the plans of the Venetian sailor. Thus it was that in place of the man whom he had appointed as second in command, another was imposed upon him, and that instructions destined to be unsealed when at sea were delivered to each captain. They contained this absurd arrangement, that in case of the death of the captain-general, eleven individuals were to succeed

him each in his turn. Was not this an encouragement given to assassination?

Scarcely was the fleet out of sight of land, when discontent appeared. The rumor spread that the captain-general was not equal to his task; then as they saw that these calumnies did not affect him, they pretended that the flotilla was already short of provisions. The mutiny broke out as soon as land was reached, but Cabot was not the man to allow himself to be annihilated by it; he had suffered too much from Sir Thomas Pert's cowardice to bear such an insult. In order to nip the evil in the bud, he had the mutinous captains seized, and notwithstanding their reputation and the brilliancy of their past services, he made them get into a boat, and abandoned them on the shore. Four months afterwards they had the good luck to be picked up by a Portuguese expedition, which seems to have had orders to thwart the plans of Cabot.

The Venetian navigator then penetrated into the Rio de la Plata, the exploration of which had been commenced by his predecessor the Pilot-major de Solis. The expedition was not then composed of more than two vessels, one having been lost during the voyage. Cabot sailed up the Argent River, and discovered an island which he called Francis Gabriel, and upon which he built the fort of San Salvador, entrusting the command of it to Antonio de Grajeda. Cabot had the keel removed from one of his caravels, and with it, being towed by his small boats, entered the Parana, built a new fort at the confluence of the Carcarama and Terceiro, and after having thus secured his line of retreat he pursued the course of these rivers farther into the interior. Arriving at the confluence of the Parana and Paraguay, he followed the second, the direction of which agreed best with his project of reaching the region of the west where silver was to be obtained. But it was not long before the aspect of the country changed, and the attitude of the inhabitants altered also. Until now, they had collected in crowds, astonished at the sight of the vessels; but upon the cultivated shores of the Paraguay they courageously opposed the stranger's landing, and three Spaniards having tried to knock down the fruit from a palm-tree, a struggle took place, in which 300 natives lost their lives. This victory had disabled twenty-five Spaniards. It was too much

for Cabot, who rapidly removed his wounded to the fort of San Spirito and retired, still presenting a bold front to the enemy.

Cabot had already sent two of his companions to the Emperor, to acquaint him with the attempt at revolt of the captains, to explain to him the motives which obliged him to modify the course marked out for his voyage, and to request aid from him, both in men and provisions. The answer arrived at last. The Emperor approved of what Cabot had done, and ordered him to colonize the country in which he had just made a settlement, but did not send him either one man or a single maravédi. Cabot tried to procure the resources which he needed in the country, and caused some attempts at cultivation to be commenced. At the same time, to keep his troops in exercise, he reduced the neighboring nations to obedience, had some forts built, and again sailing up the Paraguay he reached Potosi, and the watercourses of the Andes which feed the basin of the Atlantic. At last he prepared to enter Peru, from whence came the gold and silver which he had seen in the possession of the natives; but it needed more troops than he could muster, to attempt the conquest of this vast region. The Emperor, however, was quite unable to send him any. His European wars absorbed all his resources, the Cortes refused to vote new subsidies and the Moluccas had just been pledged to Portugal. In this state of affairs, after having occupied the country for five years, and waited all this time for the assistance which never came, Cabot decided to evacuate a part of his settlements, and he returned with some of his people to Spain. The rest, amounting to 120, men who were left to guard the fort of San Spirito, after many vicissitudes which cannot be related here, perished by the hands of the Indians, or were obliged to take refuge in the Portuguese settlements on the coast of Brazil. It is to the horses imported by Cabot that is due the wonderful race of wild horses which may be seen in large troops on the pampas of La Plata at the present day; this was the only result of the expedition.

Some time after his return to Spain, Cabot resigned his office, and went to Bristol, where he settled about 1548, that is to say at the beginning of the reign of Edward VI. What were the motives of this fresh change? Was Cabot

discontented at having been left to his own resources during his expedition? Was he hurt at the manner in which his services were recompensed? It is impossible to say. But Charles V. took advantage of Cabot's departure to deprive him of his pension, which Edward VI. hastened to replace, causing him to receive 250 marks annually, about 116*l.* and a fraction, which was a considerable sum for that period.

At this period, we may almost say there was no trade in England. All commerce was in the hands of the Hanseatic towns, Antwerp, Hamburg, Bremen, etc. These companies of merchants had, on various occasions, obtained considerable reductions in import duties, and had ended by monopolizing the English trade. Cabot held that Englishmen possessed as good qualifications as these merchants for becoming manufacturers, and that the already powerful navy which England possessed might assist marvelously in the export of the products of the soil and of the manufactures. What was the use of having recourse to strangers when people could do their own business? If they had been unable up to this time to reach Cathay and India by the northwest, might they not endeavor to reach it by the northeast? And if they did not succeed, would they not find in this direction more commercial, and more civilized people than the miserable Esquimaux on the coast of Labrador and Newfoundland?

Cabot assembled some leading London merchants, laid his projects before them, and formed them into an association, of which on the 14th of December, 1551, he was named president for life. At the same time he exerted himself most vigorously with the king, and having made him understand the wrong which the monopoly enjoyed by strangers did to his own subjects, he obtained its abolition on the 23d of February, 1551, and inaugurated the practice of free trade.

The Association of English Merchants, under the name of "Merchant Adventurers," hastened to have some vessels built, adapted to the difficulties to be encountered in the navigation of the Arctic regions. The first improvement which the English marine owed to Cabot was the sheathing of the keels, which he had seen done in Spain, but which had not hitherto been practiced in England.

A flotilla of three vessels was assembled at Deptford. They were the *Buona-Speranza,* of which the command was given to Sir Hugh Willoughby, a brave gentleman who had earned a high reputation in war; the *Buona-Confidencia,* Captain Cornil Durforth; and the *Bonaventure,* Captain Richard Chancellor, a clever sailor, and a particular friend of Cabot's; he received the title of pilot-major. The sailing-master of the *Bonaventure* was Stephen Burrough, an accomplished mariner, who was destined to make numerous voyages in the North seas, and later to become pilot in chief for England.

Although age and his important duties prevented Cabot from placing himself at the head of the expedition, he wished at least, to preside over all the details of the equipment. He himself wrote out the instructions, which have been preserved, and which prove the prudence and skill of this distinguished navigator. He there recommends the use of the log-line, an instrument intended to measure the speed of the vessel, and he desires that the journal of the events happening at sea may be kept with regularity, and that all information as to the character, manners, habits, and resources of the people visited, and the productions of the country, may be recorded in writing. The sailors were to offer no violence to the natives, but to act towards them with courtesy. All blasphemy and swearing was to be punished with severity, and also drunkenness. The religious exercises are prescribed, prayers are to be said morning and evening, and the Holy Scriptures are to be read once in the day. Cabot ends by recommending union and concord above all, and reminds the captains of the greatness of their enterprise, and the honor which they might hope to gain; finally he promises them to add his prayers to theirs for the success of their common work.

The squadron set sail on the 20th of May, 1558, in presence of the court assembled at Greenwich, amid an immense concourse of people, after fêtes and rejoicings, at which the king, who was ill, could not be present. Near the Loffoden Islands, on the coast of Norway at the bearing of Wardhous, the squadron was separated from the *Bonaventure.* Carried away by the storm, Willoughby's two vessels touched, without doubt, at Nova Zembla, and were forced by the ice to return southwards. On the 18th of

September, they entered the port formed by the mouth of the River Arzina in East Lapland. Some time afterwards, the *Buona-Confidencia,* separated from Willoughby by a fresh tempest, returned to England. As to the latter, some Russian fishermen found his vessel the following year, in the midst of the ice. The whole crew had died of cold. This, at least, is what we are led to suppose from the journal kept by the unfortunate Willoughby up to the month of January, 1554.

Chancellor, after having waited in vain for his two consorts at the rendezvous which had been agreed upon in case of separation, thought they must have outsailed him, and rounding the North Cape, he entered a vast gulf which was none other than the White Sea; he then landed at the mouth of the Dwina, near the monastery of St. Nicholas, on the spot upon which the town of Archangel was soon to stand. The inhabitants of these desolate places told him that the country was under the dominion of the Grand Duke of Russia. Chancellor resolved at once to go to Moscow, in spite of the enormous distance which separated him from it. The Czar then on the throne was Ivan IV. Wassiliewitch, called the Terrible. For some time before this, the Russians had shaken off the Tartar yoke, and Ivan had united all the petty rival principalities in one body politic, of which the power was already becoming considerable. The situation of Russia, exclusively continental, far from any frequented sea, isolated from the rest of Europe, of which it did not yet form part, so much were its habits and manners still Asiatic, promised success to Chancellor.

The Czar, who up to this time, had not been able to procure European merchandise, except by way of Poland, and who wished to gain access to the German seas, saw with pleasure the attempts of the English to establish a trade which would be beneficial to both parties. He not only received Chancellor courteously, but he made him most advantageous offers, granted him great privileges and encouraged him, by the kindness of his reception, to repeat his voyage. Chancellor sold his merchandise to great advantage, and after taking on board another cargo of furs, of seal and whale oils, copper, and other products, returned to England, carrying a letter from the Czar. The advantages which the Company of Merchant Adventurers had derived

from this first voyage, encouraged them to attempt a second. So Chancellor, the following year, made a fresh voyage to Archangel, and took two of the Company's agents to Russia, who concluded an advantageous treaty with the Czar. Then he set out again for England with an ambassador and his suite, sent by Ivan to Great Britain. Of the four vessels which composed the flotilla, one was lost on the coast of Norway, another as it left Drontheim, and the *Bonaventure*, on board of which were Chancellor and the ambassador, foundered in the Bay of Pitsligo, on the east coast of Scotland on the 10th of November, 1556. Chancellor was drowned in the wreck, being less fortunate than the Muscovite ambassador, who had the good luck to escape; but the presents and merchandise which he was carrying to England were lost.

Such was the commencement of the Anglo-Russian Company. A goodly number of expeditions succeeded each other in those parts, but it would be beside our purpose to give an account of them. Let us now return to Cabot.

It was in 1554 that Queen Mary of England was married to Philip II., King of Spain. When the latter came to England he showed himself very ill-disposed towards Cabot, who had abandoned the service of Spain, and who, at this very moment was procuring for England a commerce which would soon immensely increase the maritime power of an already formidable country. Thus we are not surprised to learn that eight days after the landing of the King of Spain, Cabot was forced to resign his office and his pension, both of which had been bestowed upon him for life by Edward VI. Worthington was nominated in his place. Mr. Nicholls thinks that this dishonorable man, who had had some quarrels with the law, had a secret mission to seize among Cabot's plans, maps, instructions, and projects, those which could be of use to Spain. The fact is that all these documents are now lost.

At the end of this period, history completely loses sight of the old mariner. The same mystery which hangs over his birth, also envelops the place and date of his death. His immense discoveries, his cosmographical works, his study of the variations of the magnetic needle, his wisdom, his humane disposition, and his honorable conduct, place Sebastian Cabot in the foremost rank among discoverers.

A figure lost in the shadow and vagueness of legends until our own day, Cabot owes it to his biographers, to Biddle, D'Avezac, and Nicholls, that he is now better known, more highly appreciated, and for the first time really placed in the light.

POLAR EXPEDITIONS

From 1492 to 1524, France had stood aloof, officially at least, from enterprises of discovery and colonization. But Francis I. could not look on quietly while the power of his rival Charles V. received a large addition by the conquest of Mexico. He therefore ordered John Verrazzano, a Venetian who was in his service, to make a voyage of exploration. We will pause here for a short time, although the various places may have already been visited on several occasions, because for the first time the banner of France floats over the shores of the New World. This exploration besides, was to prepare the way for those of Jacques Cartier and of Champlain in Canada, as well as for the unlucky experiments in colonization of Jean Ribaut, and of Laudonnière, the sanguinary voyage of reprisals of Gourgues, and Villegagnon's attempt at a settlement in Brazil.

We possess no biographical details with regard to Verrazzano. Under what circumstances did he enter the service of France? What was his title to the command of such an expedition? Nothing is known of the Venetian traveler, for all we possess of his writings is the Italian translation of his report to Francis I. published in the collection of Ramusio. The French translation of this Italian translation exists in an abridged form in Lescarbot's work on New France and in the *Histoire des Voyages.*

Having set out with four vessels to make discoveries in the ocean, says Verrazzano in a letter written from Dieppe to Francis I. on the 8th July, 1524, he was forced by a storm to take refuge in Brittany with two of his vessels, the *Dauphine* and the *Normande,* there to repair damages. Thence he set sail for the coast of Spain, where he seems to have given chase to some Spanish vessels. We see him leave with the *Dauphine* alone on the 17th of January, 1524, a small inhabited island in the neighborhood of Madeira, and launch himself upon the ocean with a crew of fifty men,

well furnished with provisions and ammunition for an eight months' voyage.

Twenty-five days later he has made 1,500 miles to the west, when he is assailed by a fearful storm; and twenty-five days afterwards, that is to say on the 8th or 9th of March, having made about 1,200 miles, he discovers land at 30° north latitude, which he thought had never been previously explored. "When we arrived, it seemed to us to be very low, but on approaching within a quarter of a league we saw by the great fires which were lighted along the harbors and borders of the sea, that it was inhabited, and in taking trouble to find a harbor in which to land and make acquaintance with the country, we sailed more than 150 miles in vain, so that seeing the coast trended ever southwards, we decided to turn back again." The Frenchmen finding a favorable landing-place, perceived a number of natives who came towards them, but who fled away when they saw them land. Soon recalled by the friendly signs and demonstrations of the French, they showed great surprise at their clothes, their faces, and the whiteness of their skin. The natives were entirely naked, except that the middle of the body was covered with sable-skins, hung from a narrow girdle of prettily woven grasses, and ornamented with tails of other animals, which fell to their knees. Some wore crowns of bird's feathers. "They have brown skins," says the narrative, "and are exactly like the Saracens; their hair is black, not very long, and tied at the back of the head in the form of a small tail. Their limbs are well proportioned, they are of middle height, although a little taller than ourselves, and have no other defect beyond their faces being rather broad; they are not strong, but they are agile, and some of the greatest and quickest runners in the world."

This land lies at 34°. It is therefore the part of the United States which now goes by the name of Carolina. The air there is pure and salubrious, the climate temperate, the sea is entirely without rocks, and in spite of the want of harbors it is not unfavorable for navigators.

During the whole month of March the French sailed along the coast, which seemed to them to be inhabited by a numerous population. The want of water forced them to land several times, and they perceived that the savages were most pleased with mirrors, bells, knives, and sheets of

paper. One day they sent a long-boat ashore with twenty-five men in it. A young sailor jumped into the water "because he could not land on account of the waves and currents, in order to give some small articles to these people, and having thrown them to them from a distance because he was distrustful of the natives, he was cast violently on shore by the waves. The Indians seeing him in this condition, take him and carry him far away from the sea, to the great dismay of the poor sailor, who expected they were about to sacrifice him. Having placed him at the foot of a little hill, in the full blaze of the sun, they stripped him quite naked and wondered at the whiteness of his skin; then lighting a large fire they made him come to it and recover his strength, and it was then that the poor young man, as well as those who were in the boat, thought that the Indians were about to massacre and immolate him, roasting his flesh in this large brazier and then eating their victim, as do the cannibals. But it happened quite differently; for having shown a desire to return to the boat they reconducted him to the edge of the sea, and having kissed him very lovingly, they retired to a hill to see him re-enter the boat."

Continuing to follow the shore northwards for more than 150 miles, the Frenchmen reached a land which seemed to them more beautiful, being covered with thick woods. Into these forests, twenty men penetrated for more than six miles and only returned to the shore from the fear of losing themselves. In this walk, having met two women, one young and the other old, with some children, they seized one of the latter who might be about eight years old, with the idea of taking him away to France; but they could not do the same with the young woman, who began to cry with all her might, calling for aid from her compatriots, who were hidden in the wood. In this place the savages were whiter than any of those hitherto met with; they snared birds and used a bow of very hard wood, and arrows tipped with fish-bones. Their canoes, twenty feet long and four feet wide, were hollowed by fire out of a trunk of a tree. Wild vines abounded and climbed over the trees in long festoons as they do in Lombardy. With a little cultivation they would no doubt produce excellent wine—"for the fruit is sweet and pleasant like ours, and we thought that the natives were not insensible to it, for in all directions where these vines

grew, they had taken care to cut away the branches of the surrounding trees so that the fruit might ripen." Wild roses, lilies, violets, and all kinds of odoriferous plants and flowers, new to the Europeans, carpeted the ground everywhere, and filled the air with sweet perfumes.

After remaining for three days in this enchanting place, the Frenchmen continued to follow the coast northwards, sailing by day and casting anchor at night. As the land trended towards the east, they went 150 miles further in that direction, and discovered an island of triangular shape about thirty miles distant from the continent, similar in size to the Island of Rhodes, and upon which they bestowed the name of the mother of Francis I., Louisa of Savoy. Then they reached another island forty-five miles off, which possessed a magnificent harbor and of which the inhabitants came in crowds to visit the strange vessels. Two kings, especially, were of fine stature and great beauty. They were dressed in deer-skins, with the head bare, the hair carried back and tied in a tuft, and they wore on the neck a large chain ornamented with colored stones. This was the most remarkable nation which they had until now met with. "The women are graceful," says the narrative published by Ramusio. "Some wore the skins of the lynx on their arms; their head was ornamented with their plaited hair and long plaits hung down on both sides of the chest; others had headdresses which recalled those of the Egyptian and Syrian women; only the elderly women, and those who were married, wore pendants in their ears of worked copper. This land is situated on the same parallel as Rome, in 41° 40′, but its climate is much colder.

On the 5th of May, Verrazzano left this port and sailed along the sea shore for 450 miles. At last he reached a country of which the inhabitants resembled but little any of those whom he had hitherto met with. They were so wild that it was impossible to carry on any trade with them, or any sustained intercourse. What they appeared to esteem above everything else were fish-hooks, knives, and all articles in metal, attaching no value to all the trifling baubles which up to this time had served for barter. Twenty-five armed men landed and advanced from four to six miles into the interior of the country. They were received by the natives with flights of arrows, after which

the latter retired into the immense forests which appeared to cover the whole country.

One hundred and fifty miles further on spreads out a vast archipelago composed of thirty-two islands, all near the land, separated by narrow canals, which reminded the Venetian navigator of the archipelagoes which in the Adriatic border the coasts of Sclavonia and Dalmatia. At length, 450 miles further on, in latitude 50°, the French came to lands which had been previously discovered by the Bretons. Finding themselves then short of provisions, and having reconnoitered the coast of America for a distance of 2,100 miles, they returned to France, and disembarked safely at Dieppe in the month of July, 1524.

Some historians relate that Verrazzano was made prisoner by the savages who inhabit the coast of Labrador, and was eaten by them. A fact which is simply impossible, since he addressed from Dieppe to Francis I. the account of his voyage which we have just abridged. Besides, the Indians of these regions were not anthropophagi. Certain authors, but we have not been able to discover on the authority of what documents, nor under what circumstances this happened, relate that Verrazzano having fallen into the power of the Spainards, had been taken to Spain and there hanged. It is wiser to admit that we know nothing certain about Verrazzano, and that we are totally ignorant what rewards his long voyage procured for him. Perhaps when some learned man shall have looked through our archives (of which the abstract and inventory are far from being finished), he may recover some new documents; but for the present we must confine ourselves to the narrative of Ramusio.

Some years later, Jacques Cartier set out first to seek for the northwest passage, but was led instead to take possession of the country and lay the foundations of the colony of Canada.

In England a similar movement had begun, set on foot by the writings of Sir Humphrey Gilbert and of Richard Wills. They ended by persuading public opinion that it was not more difficult to find this northern passage than it had been to discover the Strait of Magellan. One of the most ardent partizans of this search was a bold sailor, called Martin Frobisher, who after having many times applied to rich ship-owners, at last found in Ambrose Dudley, Earl of

Warwick, the favorite of Queen Elizabeth, a patron, whose pecuniary help enabled him to equip a pinnace and two poor barks of from twenty to twenty-five ton's burden. It was with means thus feeble, that the intrepid navigator went to encounter the ice in localities which had never been visited since the time of the Northmen. Setting out from Deptford on the 8th of June, 1576, he sighted the south of Greenland, which he took for the Frisland of Zeno. Soon stopped by the ice, he was obliged to return to Labrador without being able to land there, and he entered Hudson's Straits. After having coasted along Savage and Resolution Islands, he entered a strait which has received his name, but which is also called by some geographers, Lunley's inlet. He landed at Cumberland, took possession of the country in the name of Queen Elizabeth, and entered into some relations with the natives. The cold increased rapidly, and he was obliged to return to England. Frobisher only brought back some rather vague scientific and geographical details about the countries which he had visited; he received, however, a most flattering welcome when he showed a heavy black stone in which a little gold was found. At once all imaginations were on fire. Several lords and the Queen herself contributed to the expense of a new armament, consisting of a vessels of 200 tons, with a crew of 100 men, and two smaller barks, which carried six months' provision both for war and for nourishment. Frobisher had some experienced sailors —Fenton, York, George Best, and C. Hall, under his command. On the 31st of May, 1577, the expedition set sail, and soon sighted Greenland, of which the mountains were covered with snow, and the shores defended by a rampart of ice. The weather was bad. Exceedingly dense fogs,—as thick as pease-soup, said the English sailors,—islands of ice a mile and a half in circumference, floating mountains which were sunk seventy or eighty fathoms in the sea, such were the obstacles which prevented Frobisher from reaching, before the 9th of August, the strait which he had discovered during his previous campaign. The English took possession of the country, and pursued both upon land and sea some poor Esquimaux, who, wounded " in this encounter, jumped in despair from the top of the rocks into the sea," says Forster in his *Voyages in the North,* " which would not have happened if they had shown themselves more submissive,

or if we could have made them understand that we were not their enemies." A great quantity of stones similar to that which had been brought to England were soon discovered. They were of gold marcasite, and 200 tons of this substance was soon collected. In their delight, the English sailors set up a memorial column on a peak to which they gave the name of Warwick Mount, and performed solemn acts of thanksgiving. Frobisher afterwards went ninety miles further on in the same strait, as far as a small island, which received the name of Smith's Island. There the English found two women, of whom they took one with her child, but left the other on account of her extreme ugliness. Suspecting, so much did superstition and ignorance flourish at this time, that this woman had cloven feet, they made her take the coverings off her feet, to satisfy themselves that they really were made like their own. Frobisher, now perceiving that the cold was increasing, and wishing to place the treasures which he thought he had collected, in a place of safety, resolved to give up for the present any further search for the northwest passage. He then set sail for England, where he arrived at the end of September, after weathering a storm which dispersed his fleet. The man, woman, and child who had been carried off were presented to the Queen. It is said with regard to them, that the man, seeing at Bristol Frobisher's trumpeter on horseback wished to imitate him, and mounted with his face turned towards the tail of the animal. These savages were the objects of much curiosity, and obtained permission from the Queen to shoot all kinds of birds, even swans, on the Thames, a thing which was forbidden to everyone else under the most severe penalties. They did not long survive, and died before the child was fifteen months old.

People were not slow in discovering that the stones brought back by Frobisher really contained gold. The nation, but above all the higher classes, were immediately seized with a fever bordering on delirium. They had found a Peru, an Eldorado. Queen Elizabeth, in spite of her practical good sense, yielded to the current. She resolved to build a fort in the newly discovered country, to which she gave the name of *Meta incognita,* (unknown boundary) and to leave there, with 100 men as garrison, under the command of Captains Fenton, Best, and Philpot, three vessels

which should take in a cargo of the auriferous stones. These 100 men were carefully chosen; there were bakers, carpenters, masons, gold-refiners, and others belonging to all the various handicrafts. The fleet was composed of fifteen vessels, which set sail from Harwich on the 31st of May, 1578. Twenty days later the western coasts of Frisland were discovered. Whales played round the vessels in innumerable troops. It is related even that one of the vessels propelled by a favorable wind, struck against a whale with such force that the violence of the shock stopped the ship at once, and that the whale after uttering a loud cry, made a spring out of the water and then was suddenly swallowed up. Two days later, the fleet met with a dead whale which they thought must be the one struck by the *Salamander*. When Frobisher came to the entrance of the strait which has received his name, he found it blocked up with floating ice. "The barque *Dennis*, 100 tons," says the old account of George Best, "received such a shock from an iceberg that she sank in sight of the whole fleet. Following upon this catastrophe, a sudden and horrible tempest arose from the southeast, the vessels were surrounded on all sides by the ice; they left much of it, between which they could pass, behind them, and found still more before them through which it was impossible for them to penetrate. Certain ships, either having found a place less blocked with ice, or one where it was possible to proceed, furled sails and drifted; of the others, several stopped and cast their anchors upon a great island of ice. The latter were so rapidly enclosed by an infinite number of islets of ice and fragments of icebergs, that the English were obliged to resign themselves and their ships to the mercy of the ice, and to protect the ships with cables, cushions, mats, boards, and all kinds of articles which were suspended to the sides, in order to defend them from the fearful shocks and blows of the ice." Frobisher himself was thrown out of his course. Finding the impossibility of rallying his squadron, he sailed along the west coast of Greenland, as far as the strait which was soon to be called Davis's Strait, and penetrated as far as the Countess of Warwick Bay. When he had repaired his vessels with the wood which was to have been used in the building of a dwelling, he loaded the ships with 500 tons of stones similar to those which he had already brought

home. Judging the season to be then too far advanced, and considering also that the provisions had been either consumed, or lost in the *Dennis,* that the wood for building had been used for repairing the vessels, and having lost 40 men, he set out on his return to England on the 31st of August. Tempests and storms accompanied him to the shores of his own country. The results of his expedition were almost none as to discoveries, and the stones, which he had put on board in the midst of so many dangers, were valueless.

This was the last Arctic voyage in which Frobisher took part. In 1585 we meet with him again as vice-admiral, under Drake; in 1588 he distinguished himself against the *Invincible Armada;* in 1590 he was with Sir Walter Raleigh's fleet on the coast of Spain; finally in a descent on the coast of France, he was so seriously wounded that he had only time to bring his squadron back to Portsmouth before he died. If Frobisher's voyages had only gain for their motive, we must put this down not to the navigator himself, but to the passions of the period, and it is not the less true that in difficult circumstances, and with means the insufficiency of which makes us smile, he gave proof of courage, talent, and perseverance. To Frobisher is due, in one word, the glory of having shown the route to his countrymen, and of having made the first discoveries in the localities where the English name was destined to render itself illustrious.

If it became necessary to abandon the hope of finding in these circumpolar regions countries in which gold abounded as it did in Peru, this was no ground for not continuing to seek there for a passage to China; an opinion supported by very skillful sailors, and one which found many adherents among the merchants of London. By the aid of several high personages, two ships were equipped; the *Sunshine,* of fifty tons' burden and carrying a crew of twenty-three in number, and the *Moonshine,* of thirty-five tons. They quitted Portsmouth on the 7th of June, 1585, under the command of John Davis.

Davis discovered the entrance of the strait which received his name, and was obliged to cross immense fields of drifting ice, after having reassured his crew, who were frightened while in the midst of a dense fog, by the dash of the icebergs, and the splitting of the blocks of ice. On the 20th

July, Davis discovered the Land of Desolation, but without being able to disembark upon it. Nine days later he entered Gilbert Bay, where he found a peaceable population, who gave him sealskins and furs in exchange for some trifling articles. These natives, some days afterwards, arrived in such numbers, that there was not less than thirty-seven canoes around Davis's vessels. In this place, the navigator perceived an enormous quantity of drift wood, amongst which he mentions an entire tree, which could not have been less than sixty feet in length. On the 6th of August, he cast anchor in a fine bay called Tottness; near a mountain of the color of gold, which received the name of Raleigh, at the same time, he gave the names of Dyer and Walsingham to two capes of that land of Cumberland.

During eleven days, Davis still sailed northwards on a very open sea, free from ice, and of which the water had the color of the Ocean. Already he believed himself at the entrance of the sea, which communicated with the Pacific, when all at once the weather changed, and became so foggy, that he was forced to return to Yarmouth, where he landed on the 30th of September.

Davis had the skill to make the owners of his ships partake in the hope which he had conceived. Thus on the 7th of May (1586), he set out again with the two ships which had made the previous voyage. To them were added the *Mermaid* of 120 tons, and the pinnace *North Star*. When, on the 25th of June, he arrived at the southern point of Greenland, Davis despatched the *Sunshine* and the *North Star* towards the north, in order to search for a passage upon the eastern coast, whilst he pursued the same route as in the preceding year, and penetrated into the strait which bears his name as far as 69°. But there was a much greater quantity of ice this year, and on the 17th of July, the expedition fell in with an "icefield" of such extent that it took thirteen days to coast along it. The wind after passing over this icy plain was so cold, that the rigging and sails were frozen, and the sailors refused to go any further. It was needful, therefore, to descend again to the east-south-east. There Davis explored the land of Cumberland, without finding the strait he was seeking, and after a skirmish with the Esquimaux, in which three of his men were killed, and

two wounded, he set out on the 19th of September, on his return to England.

Although once more his researches had not been crowned with success, Davis still had good hope, as is witnessed by a letter, which he wrote to the Company, in which he said that he had reduced the existence of the passage to a species of certainty. Foreseeing, however, that he would have more trouble in obtaining the despatch of a new expedition, he added that the expenses of the enterprise would be fully covered by the profit arising from the fishery of walrus, seals, and whales, which were so numerous in those parts, that they appeared to have there established their head-quarters. On the 15th of May, 1587, he set sail with the *Sunshine,* the *Elizabeth* of Dartmouth, and the *Helen* of London. This time he went farther north than he had ever done before, and reached 72° 12′, that is to say, nearly the latitude of Upernavik, and he described Cape Henderson's Hope. Stopped by the ice, and forced to retrace his way, he sailed in Frobisher's Strait, and after having crossed a large gulf, he arrived, in 61° 10′ latitude, in sight of a cape to which he gave the name of Chudleigh. This cape is a part of the Labrador coast, and forms the southern entrance to Hudson's Bay. After coasting along the American shores as far as 52°, Davis set out for England, which he reached on the 15th of September.

Although the solution of the problem had not been found, yet nevertheless, precious results had been obtained, but results to which people at that period did not attach any great value. Nearly the half of Baffin's Bay had been explored, and clear ideas had been obtained of its shores, and of the people inhabiting them. These were considerable acquisitions, from a geographical point of view, but they were scarcely those which would greatly affect the merchants of the city. In consequence, the attempts at finding a north-west passage were abandoned by the English for a somewhat long period.

A new nation was just come into existence. The Dutch, while scarcely delivered from the Spanish yoke, inaugurated that commercial policy, which was destined to make the greatness and prosperity of their country, by the successive despatch of several expeditions to seek for a way to China by the northeast; the same project formerly conceived by

Sebastian Cabot, which had given to England the Russian trade. With their practical instinct, the Dutch had acquainted themselves with English navigation. They had even established factories at Kola, and at Archangel, but they wished to proceed further in their search for new markets. The Sea of Kara appearing to them too difficult, they resolved, acting on the advice of the cosmographer Plancius, to try a new way by the north of Nova Zembla. The merchants of Amsterdam applied therefore, to an experienced sailor, William Barentz, born in the island of Terschelling, near the Texel. This navigator set out from the Texel in 1594, on board the *Mercure,* doubled the North Cape, saw the island of Waigatz, and found himself, on the 4th of July, in sight of the coast of Nova Zembla, in latitude 73° 25′. He sailed along the coast, doubled Cape Nassau on the 10th of July, and three days later he came in contact with the ice. Until the 3rd of August, he attempted to open a passage through the pack, testing the mass of ice on various sides, going up as far as the Orange Islands at the northwestern extremity of Nova Zembla, sailing over 1,700 miles of ground, and putting his ship about no less than eighty-one times. We do not imagine that any navigator had hitherto displayed such perseverance. Let us add that he turned this long cruise to account, to fix astronomically, and with remarkable accuracy, the latitude of various points. At last, wearied with the fruitless boxing about along the edge of the pack, the crew cried for mercy, and it became necessary to return to the Texel.

The results obtained were judged so important, that the following year, the Dutch States-General entrusted to Jacob van Heemskerke, the command of a fleet of seven vessels, of which Barentz was named chief pilot. After touching at various points upon the coasts of Nova Zembla and of Asia, this squadron was forced by the pack to go back without having made any important discovery, and it returned to Holland on the 18th of September.

As a general rule governments do not possess as much perseverance as do private individuals. The large fleet of the year 1595 had cost a great sum of money, and had produced no results; this was sufficient to discourage the States-General. The merchants of Amsterdam, therefore, substituting private enterprise for the action of the govern-

ment, which merely promised a reward to the man who should first discover the northeast passage—fitted out two vessels, of which the command was given to Heemskerke and to Jan Corneliszoon Rijp, while Barentz, who had only the title of pilot, was virtually the leader of the expedition. The historian of the voyage, Gerrit de Veer, was also on board as second mate.

The Dutchmen sailed from Amsterdam on the 10th of May, 1596, passed by the Shetland and Faröe Islands, and on the 5th of June, saw the first masses of ice, "whereat we were much amazed, believing at first that they were white swans." They soon arrived to the south of Spitzbergen, at Bear Island, upon which they landed on the 11th of June. They collected there a great number of sea-gulls' eggs, and after much trouble killed at some distance inland a white bear, destined to give its name to the land which Barentz had just discovered. On the 19th of June, they disembarked upon some far-spreading land, which they took to be a part of Greenland, and to which on account of the sharp-pointed mountains, they gave the name of Spitzbergen; of this they explored a considerable portion of the western coast. Forced by the Polar pack to go southwards again to Bear Island, they separated there from Rijp, who was once more to endeavor to find a way by the north. On the 11th of July, Heemskerke and Barentz were in the parts of Cape Kanin, and five days later they had reached the western coast of Nova Zembla, which was called Willoughby's Land. They then altered their course, and again going northwards, they arrived on the 19th at the Island of Crosses, where the ice, which was still attached to the shore, barred their passage. They remained in this place until the 4th of August, and two days later they doubled Cape Nassau. After several changes of course, which it would take too long to relate, they reached the Orange Islands at the northern extremity of Nova Zembla. They began to descend the eastern coast, but were soon obliged to enter a harbor, where they found themselves completely blocked in by the pack-ice, and in which "they were forced in great cold, poverty, misery, and grief, to stay all the winter." This was on the 26th of August. "On the 30th the masses of ice began to pile themselves one upon another against the ship, with snow falling. The ship was lifted up and surrounded in

such a manner, that all that was about her and around her began to crack and split. It seemed as if the ship must break into a thousand pieces, a thing most terrible to see and to hear, and fit to make one's hair stand on end. The ship was afterwards in equal danger, when the ice formed beneath, raising her and bearing her up as though she had been lifted by some instrument." Soon the ship cracked to such a degree, that prudence dictated the debarkation of some of the provisions, sails, gunpowder, lead, the arquebuses as well as other arms, and the erection of a tent or hut, in which the men might be sheltered from the snow and from any attacks by bears. Some days later, some sailors who had advanced from four to six miles inland, found near a river of fresh water, a quantity of drift-wood; they discovered there also the traces of wild goats and of reindeer. On the 11th of September, seeing that the bay was filled with enormous blocks of ice piled one upon the other, and welded together, the Dutchmen perceived that they would be obliged to winter in this place, and resolved, "in order to be better defended against the cold, and armed against the wild beasts," to build a house there, which might be able to contain them all, while they would leave to itself the ship, which became each day less safe and comfortable. Fortunately, they found upon the shore whole trees, coming doubtless from Siberia, and driven here by the current, and in such quantity that they sufficed not only for the construction of their habitation, but also for firewood throughout the winter.

Never yet had any European wintered in these regions, in the midst of that slothful and immovable sea, which according to the very false expressions used by Tacitus, forms the girdle of the world, and in which is heard the uproar caused by the rising of the sun. The Dutchmen, therefore, were unable to picture to themselves the sufferings which threatened them. They bore them, however, with admirable patience, without a single murmur, and without the least want of discipline or attempt at mutiny. The conduct of these brave seamen, quite ignorant of what so apparently dark a future might have in reserve for them, who with wonderful faith had "placed their affairs in the hands of God," may be always proposed as an example even to the sailors of the present day. It may well be said that they

had really in their heart the *æs triples* of which Horace speaks. It was owing to the skill, knowledge, and foresight of their leader Barentz, as much as to their own spirit of obedience, that the Dutch sailors ever came forth from Nova Zembla, which threatened to be their tomb, and again saw the shores of their own country.

The bears, which were extremely numerous at that period of the year, made frequent visits to the crew. More than one was killed, but the Dutchmen contented themselves with skinning them for the sake of their fur, and did not eat them, probably because they believed the flesh to be unwholesome. It would have been, however, a considerable addition to their food, and would have saved them from using their salted meat, and thus they might longer have escaped the attacks of scurvy. But that we may not anticipate, let us continue to follow the journal of Gerrit de Veer.

On the 23rd September, the carpenter died, and was interred the next day in the cleft of a mountain, it being impossible to put a spade into the ground, on account of the severity of the frost. The following days were devoted to the transport of drift-wood and the building of the house. To cover it in, it was necessary to demolish the fore and aft cabins of the ship; the roof was put on, on the 2nd October, and a piece of frozen snow was set up like a May pole. On the 31st September, there was a strong wind from the north-west, and as far as the eye could reach, the sea was entirely open and without ice. "But we remained as though taken and arrested in the ice, and the ship was raised full two or three feet upon the ice, and we could imagine nothing else but that the water must be frozen quite to the bottom, although it was three fathoms and a half in depth."

On the 12th October, they began to sleep in the house, although it was not completed. On the 21st, the greater part of the provisions, furniture, and everything which might be wanted was withdrawn from the ship, for they felt certain that the sun was about to disappear. A chimney was fixed in the center of the roof, inside a Dutch clock was hung up, bed-places were formed along the walls, and a wine-cask was converted into a bath, for the surgeon had wisely prescribed to the men frequent bathing as a preservative of health. The quantity of snow which fell during this winter, was really marvelous. The house disappeared entirely be-

neath this thick covering, which, however, sensibly raised the temperature within. Every time that they wished to go forth, the Dutchmen were obliged to hollow out a long corridor beneath the snow. Each night they first heard the bears, and then the foxes, which walked upon the top of the dwelling, and tried to tear off some planks from the roof, that they might get into the house. So the sailors were accustomed to climb into the chimney, whence, as from a watch-tower, they could shoot the animals and drive them off. They had manufactured a great number of snares, into which fell numbers of blue foxes, the valuable fur of which served as a protection against cold, while their flesh enabled the sailors to economize their provisions. Always cheerful and good tempered, they bore equally well the ennui of the long polar night, and the severity of the cold, which was so extreme, that during two or three days, when they had not been able to keep so large a fire as usual, on account of the smoke being driven back again by the wind, it froze so hard in the house, that the walls and the floor were covered with ice to the depth of two fingers, even in the cots where these poor people were sleeping. It was necessary to thaw the sherry, when it was served out, as was done every two days, at the rate of half a pint.

"On the 7th of December, the rough weather continued, with a violent storm coming from the northeast, which produced horrible cold. We knew no means of guarding ourselves against it, and while we were consulting together, what we could do for the best, one of our men in this extreme necessity proposed to make use of the coal which we had brought from the ship into our house, and to make a fire of it, because it burns with great heat and lasts a long time. In the evening we lighted a large fire of this coal, which threw out a great heat, but we did not provide against what might happen, for as the heat revived us completely, we tried to retain it for a long time. To this end we thought it well to stop up all the doors and the chimney, to keep in the delightful warmth. And thus, each went to repose in his cot, and animated by the acquired warmth, we discoursed long together. But in the end, we were seized with a giddiness in the head, some, however, more than others; this was first perceived to be the case with one of our men who was ill, and who for this reason had less power

of resistance. And we also ourselves were sensible of a great pain which attacked us, so that several of the bravest came out of their cots and began by unstopping the chimney, and afterwards opening the door. But the man who opened the door fainted, and fell senseless upon the snow, on perceiving which, I ran to him and found him lying on the ground in a fainting fit. I went in haste to seek for some vinegar, and with it I rubbed his face until he recovered from his swoon. Afterwards, when we were somewhat restored, the captain gave to each a little wine, in order to comfort our hearts. . . ."

"On the 11th, the weather continued fine, but so extremely cold, that no one who had not felt it could imagine it; even our shoes, frozen to our feet, were as hard as horn, and inside they were covered with ice in such a manner that we could no longer use them. The garments which we wore were quite white with frost and ice."

On Christmas Day, the 25th December, the weather was as rough as on the preceding days. The foxes made havoc upon the house, which one of the sailors declared to be a bad omen, and upon being asked why he said so, answered, "Because we can not put them in a pot, or on the spit, which would have been a good omen."

If the year 1596 had closed with excessive cold, the commencement of 1597 was not more agreeable. Most violent storms of snow, and hard frost prevented the Dutchmen from leaving the house. They celebrated Twelfth Night with gaiety, as is related in the simple and touching narrative of Gerrit de Veer. "For this purpose, we besought the captain to allow us a little diversion in the midst of our sufferings, and to let us use a part of the wine which was destined to be served out to us every other day. Having two pounds of flour we made some pancakes with oil, and each one brought a white biscuit, which we soaked in the wine and eat. And it seemed to us that we were in our own country, and amongst our relations and friends; and we were as much diverted as if a banquet had been given in our honor, so much did we relish our entertainment. We also made a Twelfth-Night king, by means of paper, and our master gunner was king of Nova Zembla, which is a country enclosed between two seas, and of the great length of six hundred miles."

After the 21st January, the foxes became less numerous, the bears reappeared, and daylight began to increase, which enabled the Dutchmen, who had been so long confined to the house, to go out a little. On the 24th, one of the sailors, who had been long ill, died, and was buried in the snow at some distance from the house. On the 28th, the weather being very fine, the men all went out, walking about, running for exercise, and playing at bowls, to take off the stiffness of their limbs, for they were extremly weak, and nearly all suffering from scurvy. They were so much enfeebled that they were obliged to go to work several times before they could carry to their house the wood which was needful. At length in the first days of March, after several tempests and driving snowstorms, they were able to verify the fact that there was no ice in the sea. Nevertheless, the weather was still rough and the cold glacial. It was not feasible as yet to put to sea again, the rather because the ship was still embedded in the ice. On the 15th of April, the sailors paid a visit to her and found her in fairly good condition.

At the beginning of May the men became somewhat impatient, and asked Barentz if he were not soon intending to make the necessary preparations for departure. But Barentz answered that he must wait until the end of the month, and then, if it should be impossible to set the ship free, he would take measures to prepare the long-boats and the launch, and to render them fit for a sea voyage. On the 20th of the month the preparations for departure commenced; with what joy and ardor it is easy to imagine. The launch was repaired, the sails were mended, and both boats were dragged to the sea, and provisions put on board. Then, seeing that the water was free, and that a strong wind was blowing, Heemskerke went to seek Barentz, who had been long ill, and declared to him "that it seemed good to him to set out from thence, and in God's name to commence the voyage and abandon Nova Zembla."

"William Barentz had before this written a paper setting forth how we had started from Holland to go towards the kingdom of China, and all that had happened, in order that, if by chance, some one should come after us, it might be known what had befallen us. This note he enclosed in the case of a musket which he hung up in the chimney."

On the 13th June, 1597, the Dutchmen abandoned the

ship, which had not stirred from her icy prison, and commending themselves to the protection of God, the two open boats put to sea. They reached the Orange Islands, and again descended the western coast of Nova Zembla in the midst of ceaselessly recurring dangers.

"On the 20th of June Nicholas Andrieu became very weak, and we saw clearly that he would soon expire. The lieutenant of the governor came on board our launch, and told us that Nicholas Andrieu was very much indisposed, and that it was very evident that his days would soon end. Upon which, William Barentz said, 'It appears to me that my life also will be very short.' We did not imagine that Barentz was so ill, for we were chatting together, and William Barentz was looking at the little chart which I had made of our voyage, and we had various discourses together. Finally he laid down the chart, and said to me, 'Gerard, give me something to drink.' After he had drunk, such weakness supervened that his eyes turned in his head, and he died so suddenly that we had not time to call the captain, who was in the other boat. This death of William Barentz saddened us greatly, seeing that he was our principal leader, and our sole pilot, in whom we had placed our whole trust. But we could not oppose the will of God, and this thought quieted us a little." Thus died the illustrious Barentz, like his successors Franklin and Hall, in the midst of his discoveries. In the measured and sober words of the short funeral oration of Gerrit de Veer may be perceived the affection, sympathy, and confidence which this brave sailor had been able to inspire in his unfortunate companions. Barentz is one of the glories of Holland, so prolific in brave and skillful navigators.

After having been forced several times to haul the boats out of the water when they were on the point of being crushed between the blocks of ice; after having seen on various occasions the sea open, and again close before them; after having suffered both from thirst and hunger, the Dutchmen reached Cape Nassau. One day, being obliged to draw up the long-boat, which was in danger of being stove in upon an iceberg, the sailors lost a part of their provisions and were all deluged with water, for the ice broke away under their feet. In the midst of so much misery they sometimes met with good windfalls. Thus, when they were

upon the ice on the Island of Crosses they found there seventy eggs of the mountain-duck. "But they did not know what they should put them in to carry them. At length one man took off his breeches, tying them together by the ends, and having put the eggs into them, they carried them on a pike between two, while the third man carried the musket. The eggs were very welcome, and we ate them like lords." From the 19th July, the Dutchmen sailed over a sea, which, if not altogether free from ice, was at least clear of those great fields of ice which had given them so much trouble to avoid. On the 28th July, when entering the Gulf of St. Lawrence, they met with two Russian vessels, which at first they dared not approach. But when they saw the sailors come to them unarmed and with friendly demonstrations, they put aside all fear, the rather as they recognized in the Russians some people whom they had met with the year before in the neighborhood of Waigatz. The Dutchmen received some assistance from them, and then continued their voyage, still keeping along the coast of Nova Zembla, and as close in shore as the ice would allow. Upon one occasion when they landed, they discovered the cochlearia (scurvy-grass), a plant of which the leaves and seeds form one of the most powerful of known antiscorbutics. They ate them, therefore, by handfuls, and immediately experienced great relief. Their provisions were, however, nearly exhausted; they had only a little bread remaining and scarcely any meat. They decided therefore to take to the open sea, in order to shorten the distance which separated them from the coast of Russia, where they hoped to fall in with some fishermen's boats, from which they might obtain assistance. In this hope they were not deceived, although they had still many trials to undergo. The Russians were much touched by their misfortunes, and consented on several occasions to bestow provisions upon them, which prevented the Dutch sailors from dying of hunger. In consequence of a thick fog the two boats were separated from each other, and did not come together again until some distance beyond Cape Kanin on the further side of the White Sea, at Kildyn Island, where some fishermen informed the Dutchmen that at Kola there were three ships belonging to their nation, which were ready to put to sea on their return to their own country. They therefore despatched thither one of their

men accompanied by a Laplander, who returned three days afterwards with a letter signed *Jan Rijp*. Great was the astonishment of the Dutch at the sight of this signature. It was only on comparing the letter just received with several others which Heemskerke had in his possession, that they were convinced that it really came from the captain, who had accompanied them the preceding year. Some days later, on the 30th September, Rijp himself arrived with a boat laden with provisions, to seek them out and take them to the Kola River, in which his ship was at anchor.

Rijp was greatly astonished at all that they related to him, and at the terrible voyage of nearly 1,200 miles which they had made, and which had not taken less than 104 days—namely, from the 13th June to the 25th September. Some days of repose accompanied by wholesome and abundant food sufficed to clear off the last remains of scurvy, and to refresh the sailors after their fatigues. On the 17th September, Jan Rijp left the Kola River, and on the 1st November the Dutch crew arrived at Amsterdam. "We had on," says Gerrit de Veer, "the same garments which we wore in Nova Zembla, having on our heads caps of white fox-skin, and we repaired to the house of Peter Hasselaer, who had been one of the guardians of the town of Amsterdam charged with presiding over the fitting out of the two ships of Jan Rijp and of our own captain. Arrived at this house, in the midst of general astonishment, because that we had been long thought to be dead, and this report had been spread throughout the town, the news of our arrival reached the palace of the prince, where there were then at table the Chancellor, and the Ambassador of the high and mighty King of Denmark and Norway, of the Goths and the Vandals. We were then brought before them by M. l'Ecoutets and two lords of the town, and we gave to the said lord Ambassador, and to their lordships the burgomasters, a narrative of our voyage. Afterwards each of us retired to his own house."

The spot where the unfortunate Barentz and his companions had wintered was not revisited until 1871, nearly three hundred years after their time. The first to double the northern point of Nova Zembla, Barentz had remained alone in the achievement until this period. On the 7th September, 1871, the Norwegian Captain, Elling Carlsen,

well known by his numerous voyages in the North Sea and the Frozen Ocean, arrived at the ice haven of Barentz, and on the 9th he discovered the house which had sheltered the Dutchmen. It was in such a wonderful state of preservation that it seemed to have been built but a day, and everything was found in the same position as at the departure of the shipwrecked crew. Bears, foxes, and other creatures inhabitating these inhospitable regions had alone visited the spot. Around the house were standing some large puncheons and there were heaps of seal, bear, and walrus bones. Inside, everything was in its place. Amongst the household utensils, the arms, and the various objects brought away by Captain Carlsen, we may mention two copper cooking-pans, some goblets, gun-barrels, augers and chisels, a pair of boots, nineteen cartridge-cases, of which some were still filled with powder, the clock, a flute, some locks and padlocks, twenty-six pewter candlesticks, some fragments of engravings, and three books in Dutch, one of which, the last edition of Mendoza's "History of China" shows the goal which Barentz sought in this expedition, and a "Manual of Navigation" proves the care taken by the pilot to keep himself well up in all professional matters.

CHAPTER IV

VOYAGES OF ADVENTURE AND PRIVATEERING WARFARE

A VERY poor cottage at Tavistock in Devonshire was the birthplace, in 1540, of Francis Drake, who was destined to gain millions by his indomitable courage, which, however, he lost with as much facility as he had obtained them. Edmund Drake, his father, was one of those clergy who devote themselves to the education of the people. His poverty was only equalled by the respect which was felt for his character. Burdened with a family as he was, the father of Francis Drake found himself obliged from necessity to allow his son to embrace the maritime profession, for which he had an ardent longing, and to serve as cabin-boy on board a coasting vessel which traded with Holland. Industrious, active, self-reliant, and saving, the young Francis Drake had soon acquired all the theoretical knowledge needed for the direction of a vessel. When he had realized

a small sum, which was increased by the sale of a vessel bequeathed to him by his first master, he made more extended voyages; he visited the Bay of Biscay and the Gulf of Guinea, and laid out all his capital in purchasing a cargo which he hoped to sell in the West Indies. But no sooner had he arrived at Rio de la Hacha, than both ship and cargo were confiscated, we know not under what frivolous pretext. All the remonstrances of Drake, who thus saw himself ruined, were useless. He vowed to avenge himself for such a piece of injustice, and he kept his word.

In 1567, two years after this adventure, a small fleet of six vessels, of which the largest was of 700 tons' burden, left Plymouth with the sanction of the Queen, to make an expedition to the coasts of Mexico. Drake was in command of a ship of fifty tons. At first starting they captured some negroes on the Cape de Verd Islands, a sort of rehearsal of what was destined to take place in Mexico. Then they besieged La Mina, where some more negroes were taken, which they sold at the Antilles. Hawkins, doubtless by the advice of Drake, captured the town of Rio de la Hacha; after which he reached St. Jean d'Ulloa, having encountered a fearful storm. But the harbor contained a numerous fleet, and was defended by formidable artillery. The English fleet was defeated, and Drake had much difficulty in regaining the English coast in January, 1568.

Drake afterwards made two expeditions to the West Indies for the purpose of studying the country. When he considered himself to have acquired the necessary information, he fitted out two vessels at his own expense: the *Swan*, of twenty-five tons, commanded by his brother John, and the *Pasha* of Plymouth, of seventy tons. The two vessels had as crew seventy-three jack-tars, who could be thoroughly depended on. From July, 1572, to August, 1573, sometimes alone, sometimes in concert with a certain Captain Rawse, Drake made a lucrative cruise upon the coasts of the Gulf of Darien, attacked the towns of Vera Cruz and of Nombre de Dios, and obtained considerable spoil. Unfortunately these enterprises were not carried out without much cruelty and many acts of violence which would make men of the present day blush. But we will not dwell upon the scenes of piracy and barbarity which are only too frequently met with in the sixteenth century.

After assisting in the suppression of the rebellion in Ireland, Drake, whose name was beginning to be well known, was presented to Queen Elizabeth. He laid before her his project of going to ravage the western coasts of South America, by passing through the Strait of Magellan, and he obtained, with the title of admiral, a fleet of six vessels, on board of which were 160 picked sailors.

Francis Drake started from Plymouth on the 15th November, 1577. He had some intercourse with the Moors of Mogador, of which he had no reason to boast, made some captures of small importance before arriving at the Cape de Verd Islands, where he took in fresh provisions, and then was fifty-six days in crossing the Atlantic and reaching the coast of Brazil, which he followed as far as the estuary of La Plata, where he laid in a supply of water. He afterwards arrived at Seal Bay in Patagonia, where he traded with the natives, and killed a great number of penguins and sea-wolves for the nourishment of his crew. On the 3rd June, Drake reached the harbor of St. Julian, where he found a gibbet erected of yore by Magellan for the punishment of some rebellious members of his crew. Drake, in his turn, chose this spot to rid himself of one of his captains, named Doughty, who had been long accused of treason and underhand dealing, and who on several occasions had separated himself from the fleet. Some sailors having confessed that he had solicited them to join with him in frustrating the voyage, Doughty was convicted of the crimes of rebellion, and of tampering with the sailors, and according to the laws of England, he was condemned by a court martial to be beheaded. This sentence was immediately executed, although Doughty until the last moment vehemently declared his innocence. Was his guilt thoroughly proved? If Drake were accused upon his return to England—in spite of the moderation which he always evinced towards his men,—of having taken advantage of the opportunity to get rid of a rival whom he dreaded, it is difficult to conceive that the forty judges who pronounced the sentence should have concerted together to further the secret designs of their admiral and condemn an innocent man.

On the 20th of August, the fleet, now reduced to three vessels—two of the ships having been so much damaged that they were at once destroyed by the admiral—entered

the strait, which had not been traversed since the time of Magellan. Although he met with fine harbors, Drake found that it was difficult to anchor in them, on account both of the depth of the water close to the shore, and of the violence of the wind, which, blowing as it did in sudden squalls, rendered navigation dangerous. During a storm which was encountered at the point where the strait opens into the Pacific, Drake beheld one of his ships founder, while his last companion was separated from him a few days afterwards, nor did he see her again until the end of the campaign. Driven by the currents to the south of the strait as far as 55° 40′, Drake had now only his own vessel; but by the injury which he did to the Spaniards, he showed what ravages he would have committed if he had had still under his command the fleet with which he left England. During a descent upon the island of Mocha, the English had two men killed and several wounded, while Drake himself, hit by two arrows on the head, found himself utterly unable to punish the Indians for their perfidy. In the harbor of Valparaiso he captured a vessel richly laden with the wines of Chili, and with ingots of gold valued at 37,000 ducats; afterwards he pillaged the town, which had been precipitately abandoned by its inhabitants. At Coquimbo, the people were forewarned of his approach, so that he found there a strong force, which obliged him to re-embark. At Arica he plundered three small vessels, in one of which he found fifty-seven bars of silver valued at 2,006*l.* In the harbor of Lima, where were moored twelve ships or barks, the booty was considerable. But what most rejoiced the heart of Drake was to learn that a galleon named the *Cagafuego,* very richly laden, was sailing towards Paraca. He immediately went in pursuit, capturing on the way a bark carrying 80 lbs. of gold, which would be worth 14,080 French crowns, and in the latitude of San Francisco he seized without any difficulty the *Cagafuego,* in which he found 80 lbs. weight of gold. This caused the Spanish pilot to say, laughing, "Captain, our ship ought no longer to be called *Cagafuego* (spit-fire), but rather *Caga-Plata* (spit money), it is yours which should be named *Caga-Fuego.*" After making some other captures more or less valuable, upon the Peruvian coast, Drake, learning that a considerable fleet was being prepared to oppose him, thought it time to return to

England. For this, there were three different routes open to him: he might again pass the Strait of Magellan, or he might cross the Southern Sea, and doubling the Cape of Good Hope might so return to the Atlantic Ocean, or he could sail up the coast of China and return by the Frozen Sea and the North Cape. It was this last alternative, as being the safest of the three, which was adopted by Drake. He therefore put out to sea, reached the 38° of north latitude, and landed on the shore of the Bay of San Francisco, which had been discovered three years previously by Bodega.

The details given by Drake of his reception by the natives, are curious enough: "When we arrived, the savages manifested great admiration at the sight of us, and thinking that we were gods, they received us with great humanity and reverence. As long as we remained, they continued to come and visit us, sometimes bringing us beautiful plumes made of feathers of divers colors, and sometimes petun (tobacco) which is a herb in general use among the Indians. But before presenting these things to us, they stopped at a little distance, in a spot where we had pitched our tents. Then they made a long discourse after the manner of a harangue, and when they had finished, they laid aside their bows and arrows in that place, and approached us to offer their presents."

"The first time they came their women remained in the same place, and scratched and tore the skin and flesh of their cheeks, lamenting themselves in a wonderful manner, whereat we were much astonished. But we have since learnt that it was a kind of sacrifice which they offered to us."

The facts given by Drake with regard to the Indians of California are almost the only ones which he furnishes upon the manners and customs of the nations which he visited. We would draw the reader's attention here, to that custom of long harangues which the traveler especially remarks, just as Cartier had observed upon it forty years earlier, and which is so noticeable amongst the Canadian Indians at the present day. Drake did not advance farther north and gave up his project of returning by the Frozen Sea. When he again set sail, it was to descend towards the Line, to reach the Moluccas, and to return to England by the Cape of Good Hope. As this part of the voyage deals with countries

already known, and as the observations made by Drake are neither numerous nor novel, our narrative here shall be brief.

On the 13th of October, 1579, Drake arrived in latitude 8° north, at a group of islands of which the inhabitants had their ears much lengthened by the weight of the ornaments suspended to them; their nails were allowed to grow, and appeared to serve as defensive weapons, while their teeth, "black as ship's pitch," contracted this color from the use of the betel-nut. After resting for a time, Drake passed by the Philippines, and on the 14th of November arrived at Ternate. The king of this island came alongside, with four canoes bearing his principal officers dressed in their state costumes. After an interchange of civilities and presents, the English received some rice, sugar-canes, fowls, *figo*, cloves, and sago. On the morrow, some of the sailors who had landed, were present at a council. "When the king arrived, a rich umbrella or parasol all embroidered in gold was borne before him. He was dressed after the fashion of his country, but with extreme magnificence, for he was enveloped from the shoulders with a long cloak of cloth of gold reaching to the ground. He wore as an ornament upon the head, a kind of turban made of the same stuff, all worked in fine gold and enriched with jewels and tufts. On his neck there hung a fine gold chain many times doubled, and formed of broad links. On his fingers, he had six rings of very valuable stones, and his feet were encased in shoes of morocco leather."

After remaining some time in the country to refresh his crew, Drake again put to sea, but his ship on the 9th of January, 1580, struck on a rock, and to float her off it was necessary to throw overboard eight pieces of ordnance and a large quantity of provisions. A month later, Drake arrived at Baratena Island where he repaired his ship. This island afforded much silver, gold, copper, sulphur, spices, lemons, cucumbers, cocoa-nuts, and other delicious fruits. "We loaded our vessels abundantly with these, being able to certify that since our departure from England we have not visited any place where we have found more comforts in the way of food and fresh provisions than in this island and that of Ternate."

After quitting this richly endowed island, Drake landed

at Greater Java, where he was very warmly welcomed by the five kings amongst whom the island was partitioned, and by the inhabitants. "These people are of a fine degree of corpulence, they are great connoisseurs in arms, with which they are well provided, such as swords, daggers, and bucklers, and all these arms are made with much art." Drake had been some little time at Java when he learnt that not far distant there was a powerful fleet at anchor, which he suspected must belong to Spain; to avoid it he put to sea in all haste. He doubled the Cape of Good Hope during the first days of June, and after stopping at Sierra Leone to take in water, he entered Plymouth Harbour on the 3rd November, 1580, after an absence of three years all but a few days.

The reception which awaited him in England was at first extremely cold. His having fallen by surprise both upon Spanish towns and ships, at a time when the two nations were at peace, rightly caused him to be regarded by a portion of society as a pirate, who tramples under foot the rights of nations. For five months the Queen herself, under the pressure of diplomatic proprieties, pretended to be ignorant of his return. But at the end of that time, either because circumstances had altered, or because she did not wish to show herself any longer severe towards the skillful sailor, she repaired to Deptford where Drake's ship was moored, went on board, and conferred the honor of knighthood upon the navigator.

From this period Drake's part as a discoverer is ended, and his after-life as a warrior and as the implacable enemy of the Spaniards does not concern us. Loaded with honors, and invested with important commands, Drake died at sea on the 28th January, 1596, during an expedition against the Spaniards.

To him pertains the honor of having been the second to pass through the Strait of Magellan, and to have visited Terra del Fuego as far as the parts about Cape Horn. He also ascended the coast of North America to a point higher than any of his predecessors had attained, and he discovered several islands and archipelagoes. Being a very clever navigator, he made the transit through the Strait of Magellan with great rapidity. If there are but very few discoveries due to him, this is probably either because he

neglected to record them in his journal, or because he often mentions them in so inaccurate a manner that it is scarcely possible to recognize the places. It was he who inaugurated that privateering warfare by which the English, and later on the Dutch, were destined to inflict much injury upon the Spaniards. And the large profits accruing to him from it, encouraged his contemporaries, and gave birth in their minds to the love for long and hazardous voyages.

One year after the return of the companions of Barentz, two ships, the *Mauritius* and the *Hendrik-Fredrik,* with two yachts, the *Eendracht* and *Espérance,* having on board a crew of 248 men, quitted Amsterdam on the 2nd July, 1598. The commander-in-chief of this squadron was Oliver de Noort, a man at that time about thirty or thereabouts, and well known as having made several long cruising voyages. His second in command and vice-admiral was Jacob Claaz d'Ulpenda, and as pilot there was a certain Melis, a skillful sailor of English origin. This expedition, fitted out by the merchants of Amsterdam with the concurrence and aid of the States-General of Holland, had a double purpose; at once commercial and military. Formerly the Dutch had contented themselves with fetching from Portugal the merchandise which they distributed by means of their coasting vessels throughout Europe; but now they were reduced to the necessity of going to seek the commodities in the scene of their production. For this object, De Noort was to show his countrymen the route inaugurated by Magellan, and on the way to inflict as much injury as he could upon the Spaniards and Portuguese. At this period Philip II., whose yoke the Dutch had shaken off, and who had just added Portugal to his possessions, had forbidden his subjects to have any commercial intercourse with the rebels of the Low Countries. It was thus a necessity for Holland if she did not wish to be ruined, and as a consequence, to fall anew under Spanish rule, to open up for herself a road to the Spice Islands. The route which was the least frequented by the enemy's ships was that by the Strait of Magellan, and this was the one which De Noort was ordered to follow.

After touching at Goree, the Dutch anchored in the Gulf of Guinea, at the Island *do Principe.* Here the Portuguese pretended to give a friendly welcome to the men who went on shore, but they took advantage of a favorable opportunity,

to fall upon and massacre them without mercy. It was a sorrowful commencement for a campaign, a sad presage which was destined not to remain unfulfilled. De Noort, who was furious over this foul play, landed from his ships 120 men; but he found the Portuguese so well entrenched, that after a brisk skirmish in which seventeen more of his men were either killed or wounded, he was obliged to weigh anchor without having been able to avenge the wicked and cowardly perfidy to which his brother and twelve of his companions had fallen victims. On the 25th December, one of the pilots named Jan Volkers, was abandoned on the African coast as a punishment for his disloyal intrigues, for endeavoring to foment a spirit of despondency amongst the crews, and for his well-proven rebellion. On the 5th January, the island of Annobon, situated in the Gulf of Guinea, a little below the Line, was sighted, and the course of the ships was changed for crossing the Atlantic. De Noort had scarcely cast anchor in the Bay of Rio Janeiro before he sent some sailors on shore to obtain water and buy provisions from the natives; but the Portuguese opposed the landing, and killed eleven men. Afterwards, repulsed from the coast of Brazil by the Portuguese and the natives, driven back by contrary winds, having made vain efforts to reach the island of St. Helena, where they had hoped to obtain the provisions of which they were in the most pressing want, the Dutchmen, deprived of their pilot, toss at random upon the ocean. They land upon the desert islands of Martin Vaz, again reach the coast of Brazil at Rio Doce, which they mistake for Ascension Island, and are finally obliged to winter in the desert island of Santa Clara. The putting into port at this place was marked by several disagreeable events. The flag-ship struck upon a rock with so much violence that had the sea been a little rougher, she must have been lost. There were also some bloody and barbarous executions of mutinous sailors, notably that of a poor man who having wounded a pilot with a knife thrust, was condemned to have his hand nailed to the mainmast. The invalids, of whom there were many on board the fleet, were brought on shore, and nearly all were cured by the end of a fortnight. From the 2nd to the 21st of June, De Noort remained on this island, which was not more than three miles from the mainland. But before putting to sea he was

obliged to burn the *Eendracht*, as he had not sufficient men to work her. It was not until the 20th December, after having been tried by many storms, that he was able to cast anchor in Port Desire, where the crew killed in a few days a quantity of dog-fish and sea-lions, as well as more than five thousand penguins. "The general landed," says the French translation of De Noort's narrative, published by De Bry, "with a party of armed men, but they saw nobody, only some graves placed on high situations among the rocks, in which the people bury their dead, putting upon the grave a great quantity of stones, all painted red, having besides adorned the graves with darts, plumes of feathers, and other singular articles which they use as arms."

The Dutch saw also, but at too great a distance to shoot them, buffalos, stags, and ostriches, and from a single nest they obtained ten ostrich eggs. Captain Jacob Jansz Huy de Cooper, died during the stay at this place, and was interred at Port Desire. On the 23d of November, the fleet entered the Strait of Magellan. During a visit to the shore three Dutchmen were killed by some Patagonians, and their death was avenged by the massacre of a whole tribe of Enoos. The long navigation through the narrows and the lakes of the Strait of Magellan was signalized by the meeting with two Dutch ships, under the command of Sebald de Weerdt, who had wintered not far from the Bay of Mauritius, and by the abandoning of Vice-admiral Claaz, who, as it would appear, had been several times guilty of insubordination. Are not these acts, which we see so frequently committed by English, Dutch, and Spanish navigators, a true sign of the times? A deed which we should regard nowadays as one of terrible barbarity seemed, doubtless, a relatively mild punishment in the eyes of men so accustomed to set but little value upon human life. Nevertheless, could anything be more cruel than to abandon a man in a desert country, without arms and without provisions, to put him on shore in a country peopled by ferocious cannibals, prepared to make a repast on his flesh; what was it but condemning him to a horrible death?

On the 29th of February, 1600, De Noort, after having been ninety-nine days in passing through the strait, came out on to the Pacific Ocean. A fortnight later, a storm separated him from the *Hendrik Fredrik*, which was never again heard

of. As for De Noort, who had now with him only one yacht besides his own vessel, he cast anchor at the island of Mocha, and, unlike the experience of his predecessors, he was very well received by the natives. Afterwards he sailed along the coast of Chili, where he was able to obtain provisions in abundance in exchange for Nuremberg knives, hatchets, shirts, hats, and other articles of no great value. After ravaging, plundering, and burning several towns on the Peruvian coast, after sinking all the vessels that he met with, and amassing a considerable booty, De Noort, hearing that a squadron commanded by the brother of the viceroy, Don Luis de Velasco, had been sent in pursuit of him; judged it time to make for the Ladrone Islands, where he anchored on the 16th of September. "The inhabitants came around our ship with more than 200 canoes, there being three, four, or five men in each canoe, crying out all together: 'Hierro, hierro' (iron, iron), which is greatly in request amongst them. They are as much at home in the water as upon land, and are very clever divers, as we perceived when we threw five pieces of iron into the sea, which a single man went to search for." De Noort could testify unfortunately, that these islands well deserved their name. The islanders tried even to drag the nails out of the ship, and carried off everything upon which they could lay their hands. One of them, having succeeded in climbing along a part of the rigging, had the audacity to enter a cabin and seize upon a sword, with which he threw himself into the sea.

On the 14th October following, De Noort traversed the Philippine Archipelago, where he made several descents, and burnt, plundered, or sunk a number of Spanish or Portuguese vessels, and some Chinese junks. While cruising in the Strait of Manilla he was attacked by two large Spanish vessels, and in the battle which followed the Dutch had five men killed, and twenty-five wounded and lost their brigantine, which was captured with her crew of twenty-five men. The Spaniards lost more than 200 men, for their flag-ship caught fire and sank. Far from picking up the wounded and the able-bodied men, who were trying to save themselves by swimming, the Dutch, "making way with sails set on the foremast, across the heads which were to be seen in the water, pierced some with lances, and also discharged their

cannon over them." After this bloody and fruitless victory, De Noort went to recruit at Borneo, captured a rich cargo of spices at Java, and having doubled the Cape of Good Hope, landed at Rotterdam on the 26th of August, having only one ship and forty-eight men remaining. If the merchants who had defrayed the expenses of the expedition approved of the conduct of De Noort, who brought back a cargo which more than reimbursed them for their expenditure, and who had taught his countrymen the way to the Indies, it behooves us, while extolling his qualities as a sailor, to take great exception to the manner in which he exercised the command, and to mete out severe blame for the barbarity which has left a stain of blood upon the first Dutch voyage of circumnavigation.

CHAPTER V

MISSIONARIES AND SETTLERS

THE seventeenth century has a distinctive character of its own, differing from that of the preceding century in the fact that nearly all the great discoveries had been already made, and that the work of this whole period consists almost exclusively in perfecting the information already acquired. It contrasts equally with the century which succeeded it, because scientific methods were not yet applied by astronomers and sailors, as they were 100 years later. It appears in fact, that the narratives of the first explorers—who were only able, so to speak, to obtain a glimpse of the regions which they traversed while waging their wars,—may have in some degree exercised a baneful influence upon the public mind. Curiosity, in the narrowest sense of the word, was carried to an extreme. Men traveled over the world to gain an idea of the manners and customs of each nation, of the productions and manufactures of each country, but there was no real study. They behold, curiosity is satisfied, and they pass on. The observations made do not penetrate beneath the surface, and the great object appears to be to visit, as rapidly as may be, all the regions which the sixteenth century has brought to light.

Besides, the abundance of the wealth diffused on a sudden over the whole of Europe had caused an economic crisis.

Commerce, like industry, was transformed and altered. New ways were opened, new wants created, luxury increased, and the eagerness to make a fortune rapidly by speculation turned the heads of many. If Venice from a commercial point of view was dead, the Dutch constituted themselves, to use a happy expression of M. Leroy-Beaulieu, "the carriers and agents of Europe," and the English were preparing to lay the foundations of their vast colonial empire.

To the merchants succeed the missionaries. They alight in large numbers upon the newly discovered countries, preaching the Gospel, civilizing the barbarous nations, studying and describing the country. The development of Apostolic zeal is one of the dominant features of the seventeenth century, and it behooves us to recognize all that geography and historic science owe to these devoted, learned, and unassuming men. The traveler only passes through a country, the missionary dwells in it. The latter has evidently much greater facilities for acquiring an intimate knowledge of the history and civilization of the nations which he studies. It is, therefore, very natural that we should owe to them narratives of journeys, descriptions, and histories, which are still consulted with advantage, and which have served as a basis for later works.

If there be any country to which these reflections more particularly apply, it is to Africa, and especially to Abyssinia. How much of this vast triangular continent of Africa was known in the seventeenth century? Nothing but the coasts, it will be said. A mistake. From the earliest times the two branches of the Nile, the Astapus and the Bahr-el-Abiad, had been known to the ancients. They had even advanced—if the lists of countries and nations discovered at Karnak by M. Mariette may be believed—as far as the great lakes of the interior. In the twelfth century, the Arab geographer Edrisi writes an excellent description of Africa for Roger II. of Sicily, and confirms these data. Later on, Cadamosto and Ibn Batuta travel over Africa, and the latter goes as far as Timbuctoo. Marco Polo affirms that Africa is only united to Asia by the Isthmus of Suez, and he visits Madagascar. Lastly, when the Portuguese, led by Vasco da Gama, have completed the circumnavigation of Africa, some of them remain in Abyssinia,

and in a short time diplomatic relations are established between that country and Portugal. We have already said something of Francesco Alvarez; in his train several Portuguese missionaries settle in the country, amongst whom must be named Fathers Paez and Lobo.

Father Paez left Goa in 1588 to preach Christianity upon the eastern coast of North Africa. After long and sad mishaps, he landed at Massowah in Abyssinia, traversed the country, and in 1618 pushed on as far as the sources of the Blue Nile,—a discovery the authenticity of which Bruce was hereafter to dispute, but of which the narrative differs only in some unimportant particulars from that of the Scotch traveler. In 1604, Paez, arrived at the court of the king Za Denghel, had preached with such success that he had converted the king and all his court. He had even acquired so great an influence over the Abyssinian monarch, that the latter, in writing to the Pope and to the King of Spain to offer them his friendship, asked them to send him men fitted to teach his people.

Father Geronimo Lobo landed in Abyssinia with Alfonzo Meneses, patriarch of Ethiopia, in 1625. But times were greatly changed. The king converted by Paez had been murdered, and his successor, who had summoned the Portuguese missionaries, died after a short time. A violent revulsion of feeling ensued against the Christians, and the missionaries were driven away, imprisoned, or given up to the Turks. Lobo was charged with the mission of obtaining the sum necessary for the ransom of his companions. After many wanderings, which led him to Brazil, Carthagena, Cadiz, and Seville, to Lisbon and to Rome, where he gave the Pope and the King of Spain numerous and accurate details upon the Church of Ethiopia and the manners of the inhabitants, he made a last journey in India, and returned to Lisbon to die, in 1678.

Christianity had been introduced into the Congo, upon the Atlantic coast, in 1489, the year of its discovery by the Portuguese. At first Dominicans were sent; but as they made scarce any progress, the Pope, with the consent of the King of Portugal, despatchel thither some Italian Capuchins. These were Carli de Placenza in 1667, Giovanni Antonio Cavazzi, from 1654 to 1668, afterwards Antonio Zucchelli and Gradisca, from 1696 to 1704. We mention these mis-

sionaries particularly because they published accounts of their journeys. Cavazzi explored in succession Angola, the country of Matamba, and the islands of Coanza and Loana. In the ardor of his apostolic zeal, he could devise no better means of converting the blacks than by burning their idols, rebuking the kings for the time-honored custom of polygamy, and subjecting to torture, or to being torn with whips, those who relapsed into idolatry. Notwithstanding all this, he gained considerable ascendancy over the natives, which, if it had been well directed, might have produced very useful results in the development of civilization and the progress of religion. The same reproach is due also to Father Zucchelli and to the other missionaries in Congo. The narrative of Cavazzi, published at Rome in 1687, asserted that Portuguese influence extended from 200 to 300 miles from the coast, and that in the interior there existed a very important town, known by the name of San Salvador.

At the close of the fourteenth century Pigafetta published the account of the journey of Duarte Lopez, ambassador from the King of Congo to the Courts of Rome and Lisbon. A map which accompanies this narrative presents to us a Lake Zambré, in the very place occupied by Lake Tanganyika, and more to the west, Lake Acque Lunda, from whence issued the Congo River; south of the equator two lakes are indicated, one the Lake of the Nile, the other, more to the east, bears the name of Colué; they appear to be the Albert and the Victoria Nyanza. This most curious information was rejected by the geographers of the nineteenth century, who left blank the whole interior of Africa.

Upon the west coast of Africa at the mouth of the Senegal, the French had established settlements which, under the skillful administration of Andrew Brue, speedily received considerable extension. Brue, *Commandant for the King and Director-general of the Royal French Company upon the Senegal Coast and in other parts of Africa*—so ran his official title—although he may be little known, and the article which treats of him may be one of the most curtailed in the great collections of biography, deserves to occupy one of the most prominent positions among colonizers and explorers. Not content with extending the colony as far as its present limits, he explored countries which have been only lately revisited by Lieutenant Mage, or which have not

been visited at all since Brue's time. He carried the French outposts eastwards above the junction of the Senegal and the Faleme, northwards as far as Arguin, and southwards as far as the island of Bissao. He explored in the interior Galam and Bambouk, so rich in gold, and collected the earliest documents concerning the Pouls, Peuls or Fouls, the Yoloffs and the Mussulmen, who coming from the north, attempted the religious conquest of all the black nations of the country. The information thus collected by Brue about the history and migrations of these various people is of the greatest value, affording clear light, even in the present day, to the geographer and the historian.

Of Indo-China and Thibet the only information which reached Europe during the whole of the seventeenth century was due to the missionaries. Such names as Father Alexandre de Rhodes, Ant. d'Andrada, Avril, Benedict Goes, may not be passed over in silence. In their *Annual Letters* is to be found a quantity of information, which even in the present day retains a real interest, as concerning regions so long closed against Europeans. In Cochin China and Tonkin, Father Tachard devoted himself to astronomical observations, of which the result was to prove by the most conclusive evidence the great errors in the longitudes given by Ptolemy. This called the attention of the learned world to the necessity of a reform in the graphic representation of the countries of the extreme east, and for attaining this end, to the absolute need of close observations made by specially qualified scientific men, or by navigators familiar with astronomical calculations. The country which especially attracted the missionaries was China, that enormous and populous empire, which ever since the arrival of Europeans in India, had persevered with the greatest strictness in the absurd policy of abstention from any intercourse whatsoever with foreigners. It was not until the close of the sixteenth century that the missionaries obtained the permission, so often demanded before in vain, to penetrate into the Middle Empire. Their knowledge of mathematics and astronomy facilitated their settlement and enabled them to gather, as well from the ancient annals of the country, as during their journeys, a prodigious quantity of most valuable information concerning the history, ethnography, and geography of the Celestial Empire. Fathers Mendoza, Ricci, Trigault,

Visdelou, Lecomte, Verbiest, Navarrete, Schall, and Martini, deserve especial mention for having carried to China the arts and sciences of Europe, while they diffused in the west the first accurate and precise information upon the unprogressive civilization of the Flowery Land.

CHAPTER VI

MERCHANTS AND TOURISTS

THE Dutch were not slow in perceiving the weakness and decadence of the Portuguese power in Asia. They felt with how much ease a clever and prudent nation might in a short time become possessed of the whole commerce of the extreme east. After a considerable number of private expeditions and voyages of reconnaissance they had founded in 1602 that celebrated Company of the Indies which was destined to raise to so high a pitch the wealth and prosperity of the metropolis. Equally in its strife with the Portuguese as in its dealing with the natives, the company pursued a very skillful policy of moderation. Far from founding colonies, or repairing and occupying the fortresses which they took from the Portuguese, the Dutch bore themselves as simple traders, exclusively occupied with their commerce. They avoided building any fortified factory, except at the intersection of the great commercial roads. Thus they were able in a short time to seize all the carrying trade between India, China, Japan, and Oceania. The one fault committed by the all-powerful company was the concentrating in its own hands a monopoly of the trade in spices. It drove away the foreigners who had settled in the Moluccas or in the Islands of Sunda, or who came thither to obtain a cargo of spices; it even went the length, in order to raise the price of this valuable commodity, of proscribing the cultivation of certain spices in a large number of the islands, and of forbidding, under pain of death, the exportation and sale of seeds and cuttings of the spice-producing trees. In a few years the Dutch were established in Java, Sumatra, Borneo, the Moluccas, and at the Cape of Good Hope, harbors the best placed for ships returning to Europe.

It was at this time that a rich merchant of Amsterdam, Jacob Lemaire, in concert with a skillful mariner, named

William Cornelius Schouten, conceived a project for reaching the Indies by a new route. The Dutch States-General had in fact forbidden any subject of the United Provinces, not in the pay of the Company of the Indies, from going to the Spice Islands by way of the Cape of Good Hope or of the Strait of Magellan. Schouten, according to some, Lemaire, according to others, had formed the idea of eluding this interdict by seeking a passage to the south of Magellan's Strait. This much is certain, that Lemaire bore one-half of the expense of the expedition, while Schouten, by the aid of several merchants whose names have been handed down to us, and who filled the chief offices in the town of Hoorn, provided the other half. They fitted out the *Concorde,* a vessel of 360 tons, and a yacht, carrying together a crew of sixty-five men, and twenty-nine cannon. This was certainly an equipment but little in accordance with the magnitude of the enterprise. But Schouten was a skillful mariner, the crew had been carefully chosen, and the vessels were abundantly furnished with provisions and spare rigging. Lemaire was commissioner, and Schouten the captain of the ship. The destination was kept secret, and officers and crew entered into an unlimited engagement to go wherever they might be led. On the 25th June, 1615, eleven days after quitting the Texel, and when there was no longer anything to be feared from indiscretion, the crews were assembled to listen to the reading of an order which ran as follows: "The two vessels would seek another passage than that of Magellan, by which to enter the South Sea, and to discover there certain southern countries, in the hope of obtaining enormous profits from them, and if heaven should not favor this design, they would repair by means of the same sea to the East Indies." This declaration was received with enthusiasm by the whole crew, who were animated, like all Dutchmen of that period, with a love for great discoveries.

The route then usually pursued for reaching South America—as may perhaps have been already observed—followed the African coasts as far as below the equator. The *Concorde* did not try to deviate from it; she reached the shores of Brazil, Patagonia, and Port Desire, at 300 miles to the north of the Strait of Magellan, but was for several days hindered by storms from entering the harbor. The yacht

even remained for the space of one whole tide, aground and lying on her side, but high water set her afloat again; only for a short time however, for whilst some repairs were being done to her keel, her rigging took fire, and she was consumed in spite of the energetic efforts of the two crews. On the 13th January, 1616, Lemaire and Schouten arrived at the Sebaldine Islands, discovered by Sebald de Weerdt, and followed the coast of Terra del Fuego at a short distance from land. The coast ran east-quarter-southeast, and was skirted by high mountains covered with snow. On the 24th of January at midday, they sighted its extreme point, but eastward stretched some more land, which also appeared to be of great elevation. The distance between these two islands, according to the general opinion, appeared to be about twenty-four miles, and Schouten entered the strait which divided them. It was so encumbered with whales that the ship was obliged to tack more than once to avoid them. The island to the east received the name of Staten Island, and that to the west the name of Maurice of Nassau.

Twenty-four hours after entering this strait, which received the name of Lemaire, the ship emerged from it, and to an archipelago of small islands situated to starboard was given the name of Barneveldt, in honor of the Grand Pensionary of Holland. In 58° Lemaire doubled Cape Horn—so named in remembrance of the town where the expedition had been fitted out—and entered the South Sea. Lemaire afterwards went northwards as far as the parallel of the Juan Fernandez Islands, where he judged it wise to stop, in order to recruit his men who were suffering from scurvy. As Magellan had done, Lemaire and Schouten passed without perceiving them amongst the principal Polynesian archipelagoes, and cast anchor on the 10th April, at the island of Dogs, where it was only possible to procure a little fresh water and some herbs.

When they were thoroughly rested from their fatigues and cured of scurvy, the Dutch went to Batavia, arriving there on the 23rd October, 1616, only thirteen months after quitting the Texel, and having lost only thirteen men during the long voyage. But the Company of the Indies did not at all understand their privileges being infringed upon, and a possibility discovered of reaching the colonies by a way

not foreseen in the letters patent which had been granted to the company at the time of its establishment. The governor caused the *Concorde* to be seized, and arrested her officers and sailors, whom he sent off to Holland, there to be tried. Poor Lemaire, who had expected a totally different recompense for his toils and fatigues, and for the discoveries which he had made, could not bear up under the blow which had fallen so unexpectedly upon him; he fell ill of grief and died in the latitude of the island of Mauritius. As for Schouten, he appears not to have been molested upon his return to his own country, and to have made several voyages to the Indies, which were not distinguished by any fresh discovery. He was returning to Europe in 1625, when he was forced by bad weather to enter Antongil Bay, upon the east coast of Madagascar, where he died.

Such was the history of this important expedition, which by means of Strait Lemaire opened up a shorter and less dangerous route than that by Magellan's Strait, an expedition signalized by several discoveries in Oceania, and by a more attentive exploration of points already seen by Spanish or Portuguese navigators. But it is often a matter of difficulty to settle with accuracy to which of these nations the discovery of certain islands, countries, or archipelagoes in the neighborhood of Australia, may be due.

Since we are speaking of the Dutch, we shall put the chronological order of discoveries a little on one side, that we may relate the expeditions of Jan Abel Tasman. What was the early history of Tasman, by what concurrence of circumstances did he embrace the profession of a sailor, by what means did he acquire the nautical skill and science of which he gave so many proofs, and which conducted him to his important discoveries? From ignorance we cannot answer these questions; all we know of his biography commences with his departure from Batavia on 2nd June, 1639. After passing the Philippines, he would seem during this first voyage to have visited in company with Matthew Quast the Bonin Islands, then known by the fantastic title of "the Gold and Silver Islands."

In a second expedition, composed of two vessels of which he had the chief command, and which sailed from Batavia on the 14th of August, 1642, he reached the Mauritius on the 5th September, and afterwards sailed to the southeast,

seeking for the Australian Continent. On the 24th November in latiude 42° 25′ south, he discovered land, to which he gave the name of Van-Diemen, after the Governor of the Sunda Islands, but which is now with much greater justice called Tasmania. He anchored there in Fredrik Hendrik Bay, and ascertained that the country was inhabited, although he could not see a single native.

After following this coast for a certain time, he sailed eastwards, with the intention of afterwards making once more for the north, to reach the Solomon Archipelago. On the 13th December, in latitude 42° 10′, he came in sight of a mountainous country which he followed towards the north, until the 18th December, when he cast anchor in a bay; but even the boldest of the savages whom he met with there, did not approach the ship within a stone's throw. Their voices were rough, their stature tall, their color brown inclining to yellow, and their black hair, which was nearly as long as that of the Japanese, was worn drawn up to the crown of the head. On the morrow they summoned courage to go on board one of the vessels and carry on traffic by means of barter. Tasman, upon seeing these pacific dispositions, despatched a boat for the purpose of obtaining a more accurate knowledge of the shore. Of the sailors who manned it, three were killed without provocation by the natives, while the others escaped by swimming, and were picked up by the ships' boats, but by the time they were in readiness to fire upon the assailants, these had disappeared. The spot where this sad event happened, received the name of Assassins' (Moordenaars) Bay. Tasman, who felt convinced that he could not carry on any intercourse with such fierce people, weighed anchor and sailed up the coast as far as its extreme point, which he named Cape Maria Van-Diemen, in honor of his "lady," for a legend states that having had the audacity to pretend to the hand of the daughter of the governor of the East Indies, the latter had sent him to sea with two dilapidated ships, the *Heemskerke* and the *Zeechen*.

The land thus discovered received the name of Staaten Land, soon changed into that of New Zealand. On the 21st January, 1643, Tasman discovered the islands of Amsterdam and Rotterdam, upon which he found a great quantity of pigs, fowls, and fruit. On the 6th February, the

ships entered an archipelago, consisting of a score of islands, which were called Prince William Islands, and after sighting Anthong-Java, Tasman followed the coast of New Guinea from Cape Santa Maria, passed by the various points previously discovered by Lemaire and Schouten, and anchored off Batavia on the 15th June following, after a ten months' voyage.

In a second expedition, Tasman, in obedience to his orders dated 1664, was to visit Van Diemen's Land, and to make a careful examination of the western coast of New Guinea, as far as 17° south latitude, in order to ascertain whether that island belonged to the Australian continent. It does not appear that Tasman carried out this programme, but the loss of his journals causes complete uncertainty as to the route which he followed, and the discoveries which he may have made. From this time there is no record of the events which marked the close of his career, nor of the place and date of his death.

It behooves us now to say a few words about some travelers who explored some unfrequented countries, and furnished their contemporaries with more exact knowledge of a world until then almost unknown. The first of these travelers is François Pyrard, of Laval. Having embarked in 1601 on board a St. Malo ship to go to the Indies to trade, he was wrecked in the Maldive Archipelago. These islets or atolls (detached coral reefs), to the number of at least 12,000, descend into the Indian Ocean from Cape Comorin as far as the equator. The worthy Pyrard relates his shipwreck, the flight of a portion of his companions in captivity in the archipelago, and his long sojourn of seven years upon the Maldive Islands, a stay rendered almost agreeable by the pains which he took to acquire the native language. He had plenty of time to learn the manners, customs, religion, and industries of the inhabitants, as well as to study the productions and climate of the country. Thus his narrative is filled with details of all kinds, and had retained its attractions until recent years, because travelers do not voluntarily frequent this unhealthy archipelago, the isolated situation of which had kept away foreigners and conquerors. Pyrard's narrative therefore, is still instructive and agreeable reading.

In 1607, a fleet was sent to the Maldives by the King of Bengal, in order to carry off the 100 or 120 cannon which

the Maldive sovereign owed to the wreck of numerous Portuguese vessels. Pyrard, notwithstanding all the liberty allowed him, and that he had become a landholder, was desirous to behold his beloved Brittany once more. He therefore eagerly embraced this opportunity of quitting the archipelago with the three companions who out of the whole crew alone remained with him. But the eventful travels of Pyrard were not yet concluded. Taken first to Ceylon, he was carried afterwards to Bengal, and endeavored to reach Cochin. Before reaching this town he was captured by the Portuguese and carried prisoner to Cochin; he afterwards fell ill and was nursed in the Hospital of Goa which he only quitted to serve for two years as a soldier, at the end of which time he was again thrown into prison, and it was not until 1611, that he was able to revisit the good town of Laval. After so many trials, Pyrard must doubtless have felt the need of repose, and we are justified in imagining, from the silence of history as to the close of his life, that he was privileged at length to find happiness.

While the honest burgess François Pyrard, was, so to speak, in spite of himself, and from having indulged the desire of making a fortune too rapidly, launched into adventures in which he had to pass much of his life, circumstances of a different and romantic kind caused Pietro della Valle to determine upon traveling. Descendant of an ancient and noble family, he is by turns a soldier of the Pope, and a sailor chasing Barbary corsairs. Upon his return to Rome he finds that a rival, profiting by his absence, has taken his place with a young girl whom he was to have married. So great a misfortune demands an heroic remedy, and Della Valle makes a vow of pilgrimage to the Holy Sepulcher. But if, as saith the proverb, there is no road which does not lead to Rome, so there is no circuit so long as not to lead to Jerusalem, and of this Della Valle was to make proof. He embarks at Venice in 1614, passes thirteen months at Constantinople, reaches Alexandria by sea, afterwards Cairo, and joins a caravan which at length brings him to Jerusalem. But while en route, Della Valle had no doubt imbibed a taste for a traveler's life, for he visits in succession Baghdad, Damascus, Aleppo, and even pushes on as far as the ruins of Babylon. We must believe that Della Valle was marked out as an easy prey to love, for upon his return he becomes

enamored of a young Christian woman of Mardin, of wondrous beauty, whom he marries. One would imagine that here at length is fixed the destiny of this indefatigable traveler. Nothing of the kind. Della Valle contrives to accompany the Shah in his war against the Turks, and to traverse during four consecutive years the provinces of Iran. He quits Ispahan in 1621, loses his wife in the month of December of the same year, causes her to be embalmed, and has her coffin carried about in his train for your years longer, which he devotes to exploring Ormuz, the western coasts of India, the Persian Gulf, Aleppo, and Syria, landing at length at Naples in 1626.

The countries which this singular character visited, urged on as he was by an extraordinary enthusiasm, are described by him in a shrewd, gay, and natural style, and even with some degree of fidelity. But he inaugurates the pleiad of amateur, curious, and commercial travelers. He is the first of that prolific race of tourists who each year encumber geographical literature with numerous volumes, from which the savant finds nothing to glean beyond meager details.

Tavernier is a specimen of insatiable curiosity. At two and twenty he has traversed France, England, the Low Countries, Germany, Switzerland, Poland, Hungary, and Italy. Then when Europe no longer offers any food for his curiosity, he starts for Constantinople, where he remains for a year, and then arrives in Persia, where the opportunity and

"Quelque diable, aussi, le poussant,"

he sets to work to purchase carpets, stuffs, precious stones, and those thousand trifles of which lovers of curiosities soon became passionately fond, and for which they were ready to pay fabulous sums. The profit which Tavernier realized from his cargo induced him to resume his travels. But like a wise and prudent man, before starting he learnt from a jeweler the art of knowing precious stones. During four successive journeys from 1638 to 1663, he traveled over Persia, the Mogul Empire, the Indies as far as the frontier of China, and the Islands of Sunda. Dazzled by the immense fortune which his traffic had obtained for him, Tavernier would play the lord, and soon saw himself on the

verge of ruin, which he hoped to avert by sending one of his nephews to the east with a considerable venture, but instead, his ruin was consummated by this young man, who, judging it best to appropriate the goods which had been confided to him, settled down at Ispahan. Tavernier, who was a well-educated man, made a number of interesting observations upon the history, manners and customs, of the countries which he visited. His narrative certainly contributed to give his contemporaries a much more correct idea of the countries of the east than they previously possessed.

All travelers during the reign of Louis XIV. take the route to the East Indies, whatever may be the end they have in view. Africa is entirely deserted, and if America be the theater of any real exploration, it is carried out without aid from government.

Whilst Tavernier was accomplishing his last and distant excursions, a distinguished archæologist, Jean de Thévenot, nephew of Melchisedec Thévenot—a learned man to whom we owe an interesting series of travels—journeyed through Europe, and visited Malta, Constantinople, Egypt, Tunis, and Italy. He brought back in 1661 an important collection of medals and monumental inscriptions, recognized nowadays as so important a help to the historian and the philologist. In 1664, he set out anew for the Levant, and visited Persia, Bassorah, Surat, and India, where he saw Masulipatam, Burhampur, Aurungabad, and Golconda. But the fatigues which he had experienced prevented his return to Europe, and he died in Armenia in 1667. The success of his narratives was considerable, and was well deserved by the care and exactitude of a traveler whose scientific attainments in history, geography, and mathematics, far surpassed the average level of his contemporaries.

We must now speak of the amiable Bernier, the "pretty philosopher," as he was entitled in his polite circle, in which were found Ninon and La Fontaine, Madame de la Sablière, St. Evremont, and Chapelle, without reckoning many other good and gay spirits, refractories from the stiff solemnity which then weighed upon the entourage of Louis XIV. Bernier could not escape from the fashion of traveling. After having taken a rapid survey of Syria and Egypt, he resided for twelve years in India, where his good knowledge of

medicine conciliated the favor of Aurung-Zebe, and gave him the opportunity of beholding in detail, and with profit, an empire then in the full bloom of its prosperity.

To the south of Hindostan, Ceylon had more than one surprise in reserve for its explorers. Robert Knox, taken prisoner by the natives, owed to this sad circumstance his long residence in the country and the collection of the first authentic documents relating to the forests and the savage natives of Ceylon, the Dutch, with a commercial jealousy which they were not singular in evincing, having until now kept secret all the information which had come to light concerning an island of which they were endeavoring to make a colony.

Another merchant, Jean Chardin, the son of a rich Parisian jeweler, jealous of the successes of Tavernier, desired, like him, to make his fortune by trading in diamonds. The countries which attract these merchants are those of which the fame for wealth and prosperity is become proverbial; these are Persia and India, where rich costumes sparkle with jewels and gold, and where there are mines of diamonds of a fabulous size. The moment is well chosen for visiting these countries. Thanks to the Mogul Emperors, civilization and art have been developed; mosques, palaces, temples have been built, and towns have risen suddenly. Their taste—that curious taste, so distinctly characterized, so different from our own—is displayed in the construction of gigantic edifices, quite as much as in jewelry and goldsmith's work, and in the manufacture of those costly trifles of which the east was beginning to be passionately fond. Like a wise man, Chardin takes a partner, as good a connoisseur as himself. At first Chardin only traversed Persia in order to reach Ormuz and to embark for the Indies. The following year he returns to Ispahan, and applies himself to learn the language of the country, in order to be able to transact business directly and without any intermediary agent. He has the good fortune to please the Shah, Abbas II. From that time his fortune is made, for it is at once genteel and also the part of a prudent courtier to employ the same purveyor as his sovereign. But Chardin had another merit besides that of making a fortune. He was able to collect so considerable a mass of information concerning the government, manners, creeds, customs, towns, and populations of Persia,

that his narrative has remained to our own days the *vade-mecum* of the traveler. This guide is so much the more precious because Chardin took care to engage at Constantinople a clever draughtsman named Grelot, by whom were reproduced the monuments, cities, scenes, costumes, and ceremonies which so well portray what Chardin called, "the every day of a people."

When Chardin returned to France in 1670, the Revocation of the Edict of Nantes, with the barbarous persecutions which resulted from it, had chased from their country great numbers of artisans, who, taking refuge in foreign countries, enriched them with our arts and manufactures. Chardin, being a Protestant, clearly perceived that his religion would hinder him from attaining "to what are termed honors and advancement." As, to use his own words, "one is not free to believe what one will," he resolved to return to the Indies, "where, without being urged to a change of religion," he could not fail of attaining an honorable position. Thus liberty of conscience was at that period greater in Persia than in France. Such an assertion on the part of a man who had made the comparison, is but little flattering to the grandson of Henry IV.

This time, however, Chardin did not follow the same route as before. He passed by Smyrna and Constantinople, and from thence, crossing the Black Sea, he landed in the Crimea, in the garb of a religious. Whilst passing through the region of the Caucasus he had the opportunity of studying the Abkasians and Circassians. He afterwards penetrated into Mingrelia, where he was robbed of his goods and papers, and of a portion of the jewels which he was taking back to Europe. He could not have escaped himself had it not been for the devotion to him of the theatines, from whom he had received hospitality, but he escaped only to fall into the hands of the Turks, who, in their turn, accepted a ransom for him. After further misadventures he arrived at Tiflis on the 17th of December, 1672, and as Georgia was then governed by a prince who was a tributary of the Shah of Persia, it was easy for Chardin to reach Erivan, Tauriz, and finally Ispahan.

After a stay of four years in Persia, and a concluding journey to India, during which he realized a considerable fortune, Chardin returned to Europe and settled in England,

his own country, on account of his religion, being forbidden ground to him.

The journal of his travels forms a large work, in which everything that concerns Persia is especially developed. The long stay he made in the country and his intimate acquaintance with the highest personages of the state enabled him to collect numerous and authentic documents. It may fairly be said that in this way Persia was better known in the seventeenth century than it was 100 years later.

The countries which Chardin had just explored were visited again some years later by a Dutch painter, Cornelius de Bruyn, or Le Brun. The great value of his work consists in the beauty and accuracy of the drawings which illustrate it, for as far as the text is concerned, it contains nothing which was not known before, except in what relates to the Samoyedes, whom he was the first to visit.

We must now speak of the Westphalian, Kæmpfer, almost a naturalized Swede in consequence of his long sojourn in Scandinavian countries. He refused the brilliant position which was there offered him in order to accompany as secretary, an ambassador who was going to Moscow. He was thus enabled to see the principal cities of Russia, a country which at that period had scarcely entered upon the path of western civilization; afterwards he went to Persia, where he quitted the Ambassador Fabricius, in order to enter the service of the Dutch Company of the Indies, and to continue his travels. He thus visited in the first place Persepolis, Shiraz, Ormuz upon the Persian Gulf, where he was extremely ill, and whence he embarked in 1688 for the East Indies. Arabia Felix, India, the Malabar Coast, Ceylon, Java, Sumatra, and Japan were afterwards all visited by him. The object of these journeys was exclusively scientific. Kæmpfer was a physician, but was more especially devoted to the various branches of natural history, and collected, described, drew, or dried, a considerable number of plants then unknown in Europe, gave new information upon their use in medicine or manufactures, and collected an immense herbarium, which is now preserved with the greater part of his manuscripts in the British Museum in London. But the most interesting portion of his narrative—nowadays indeed quite obsolete and very incomplete since the country has been opened up to our scientific men,—was for

a long time that relating to Japan. He had contrived to procure books treating of the history, literature, and learning of the country, when he had failed in obtaining from certain personages to whom he had rendered himself very acceptable, information which was not usually imparted to foreigners.

To conclude, if all the travelers of whom he have just spoken are not strictly speaking discoverers, if they do not explore countries unknown before, they all have, in various degrees and according to their ability or their studies, the merit of having rendered the countries which they visited better known. Besides they were able to banish to the domain of fable, many of the tales which others less learned had naïvely accepted, and which had for long become so completely public property that nobody dreamed of disputing them.

Thanks to these travelers, something is known of the history of the east, the migrations of nations began to be dimly suspected, and accounts to be given of the changes in those great empires of which the very existence had been long problematical.

CHAPTER VII

THE POLE AND AMERICA

ALTHOUGH the attempts to find a passage by the northwest had been abandoned by the English for twenty years, they had not, however, given up the idea of seeking by that way, for a passage which was only to be discovered in our own days, and of which the absolute impracticability was then to be ascertained. A clever sailor, Henry Hudson, of whom Ellis says, "that never did anyone better understand the seafaring profession, that his courage was equal to any emergency, and that his application was indefatigable," concluded an agreement with a company of merchants to search for the passage by the northwest. On the 1st of May, 1607, he sailed from Gravesend in the *Hopewell*, a craft about the size of one of the smallest of modern collier brigs, and having on board a crew of twelve men; and on the 13th of June, reached the eastern coast of Greenland at 73°, and gave it a name answering to the hopes he

entertained, in calling it Cape Hold with Hope. The weather here was finer and less cold than it had been ten degrees southwards. By the 27th of June, Hudson had advanced 5° more to the north, but on the 2nd of July, by one of the sudden changes which so frequently occur in those countries, the cold became severe. The sea, however, remained free, the air was still, and drift wood floated about in large quantity. On the 14th of the same month, in 33° 23′, the master's mate and the boatswain of the vessel landed upon a shore which formed the northern part of Spitzbergen. Traces of musk oxen, and foxes, great abundance of aquatic birds, two streams of fresh water, one of them being warm, proved to our navigators that it was possible to live in these extreme latitudes at this period of the year. Hudson, who had re-embarked without delay, found himself arrested at the height of 82°, by thick pack ice, which he endeavored in vain to penetrate or sail round. He was compelled to return to England, where he arrived on September 15th, after having discovered an island, which is probably that of Jan Mayen. The route followed in this first voyage having had no result towards the north, Hudson would try another, and accordingly set sail on April 21st in the following year, and advanced between Spitzbergen and Nova Zembla; but he could only follow for a certain distance the coast of that vast land, without being able to attain as high an elevation as he had wished. The failure of this second attempt was more complete than that of the voyage of 1607. In consequence, the English Company, which had defrayed the expenses of both attempts, declined to proceed further. This was doubtless the reason which decided Hudson to take service in Holland.

The Company of Amsterdam gave him, in 1609, the command of a vessel, with which he set sail from the Texel at the beginning of the year. Having doubled the North Cape, he advanced along the coasts of Nova Zembla; but his crew, composed of English and Dutch, who had made voyages to the East Indies, were soon disheartened by the cold and ice. Hudson found himself forced to change his route, and to propose to his sailors, who were in open mutiny, to seek for a passage, either by Davis's Strait, or the coasts of Virginia, where, according to the information

of Captain Smith, who had frequently visited them, an outlet must surely be found. The choice of this crew, little accustomed to discipline, could not be doubtful. In order not to render the outlay of the Company completely abortive, Hudson was obliged to make for the Faröe Islands, to descend southward as low as 44°, and to search on the coast of America for the strait, of the existence of which he had been assured. On July 18th, he disembarked on the continent, in order to replace his foremast, which had been broken in a storm; and he took the opportunity of bartering furs with the natives. But his undisciplined sailors, having by their exactions roused the indignation of the poor and peaceable natives, compelled him again to set sail. He continued to follow the coast until August 3rd, and then landed a second time. At 40° 30′, he discovered a great bay which he explored in a canoe for more than 150 miles. In the meantime, his provisions began to run short, and it was impossible to procure supplies on land. The crew, which appears to have imposed its wishes on its captain during this whole voyage, assembled; some proposed to winter in Newfoundland, in order to resume the search for the passage in the following year; others wished to make for Ireland. This latter proposition was adopted; but when they approached the shores of Great Britain, the land proved so attractive to his men, that Hudson was obliged, on November 7th, to cast anchor at Dartmouth.

The following year, 1610, notwithstanding all the mortifications which he had experienced, Hudson tried to renew his engagement with the Dutch company. But the terms which they named as the price of their concurrence compelled him to renounce the project, and induced him to submit to the requirements of the English Company. This company imposed on Hudson as a condition, that he should carry on board, rather as an assistant than as a subordinate, a clever seaman, named Coleburne, in whom they had full confidence. It is easy to understand how mortifying this condition was to Hudson. Accordingly, he took the earliest opportunity of ridding himself of the superintendent who had been imposed upon him. He had not yet left the Thames when he sent Coleburne back to shore with a letter for the Company, in which he endeav-

ored to palliate and justify this certainly very strange proceeding.

Towards the end of May, when the ship had cast anchor in one of the ports of the island, the crew formed on the subject of Coleburne, its first conspiracy, which was repressed without difficulty, and when Hudson quitted the island on June 1st, he had re-established his authority. After having passed Frobisher's Strait, he sighted the land of Desolation of Davis, entered the strait which has received his name, and speedily penetrated into a wide bay, the entire western coast of which he examined until the beginning of September. At this epoch, one of the inferior officers, continuing to excite revolt against his chief, was superseded; but this act of justice only exasperated the sailors. In the early part of November, Hudson, having arrived at the extremity of the bay, sought for an appropriate spot to winter in, and having soon found one, drew up the ship on dry land. It is difficult to understand such a resolution. On the one hand, Hudson had left England with provisions for six months only, which had already been largely reduced, and he could scarcely reckon, considering the barrenness of the country, upon procuring a further supply of nourishment; on the other, the crew had exhibited such numerous signs of mutiny, that he could hardly rely upon its discipline and good will. Nevertheless, although the English were often obliged to content themselves with scanty rations, they did not, owing to the arrival of great numbers of birds, pass a very distressing winter. But, on the return of spring, as soon as the ship was prepared to resume her route to England, Hudson found that his fate was decided. He made his arrangements accordingly, distributed to each his share of biscuit, paid the wages due, and awaited the course of events. He had not long to wait. The conspirators seized their captain, his son, a volunteer, the carpenter, and five sailors, put them on board a boat, without arms, provisions, or instruments and abandoned them to the mercy of the ocean. The culprits reached England again but not all; two were killed in an encounter with the Indians, another died of sickness, while the others were sorely tried by famine. Eventually, no prosecution was commenced against them. Only, the Company, in 1674, procured em-

ployment, on board a vessel, for the son of Henry Hudson, "lost in the discovery of the Northwest," the son being entirely destitute of resources.

The expeditions of Hudson were followed by those of Button and of Gibbons, to whom we owe, if not new discoveries, important observations on the tides, the variation of the weather and the temperature, and on a number of natural phenomena.

In 1615, the English Company entrusted to Byleth, who had taken part in the last voyages, the command of a vessel of fifty tons. Her name, the *Discovery,* was of good augury. She carried, as pilot, the famous William Baffin, whose renown has eclipsed that of his captain. Setting sail from England on April 13th, the English explorers sighted Cape Farewell by the 6th of May, passed from the Island of Desolation to the Savage Islands, where they met with a great number of natives, and ascended northwestward as high as 64°. On July 10th, land appeared on the starboard, and the tide flowed from the north; from which they conceived so much hope for the passage sought for, that they gave to the cape, discovered on this spot, the name of Comfort. It was probably Cape Walsingham, for they ascertained, after doubling it, that the land inclined towards the northeast, and the east. It was at the entry of Davis's Strait, that their discoveries came to an end for this year. They returned to Plymouth on September 9th, without having lost a single man.

So strong were the hopes entertained by Byleth and Baffin, that they obtained permission to put to sea again in the same vessel the following year. On May 14th, 1616, after a voyage in which nothing worthy of remark occurred, the two captains penetrated into Davis's Strait, sighted Cape Henderson's Hope, the extreme point formerly reached by Davis, and ascended as high as 72° 40′ to the Women's Island, thus named after some Esquimaux females whom they met with. On June 12th, Byleth and Baffin were forced by the ice to enter a bay on the coast. Some Esquimaux brought them a great quantity of horns, without doubt tusks of walruses, or horns of musk oxen; from which they named the bay Horn Sound. After remaining some days in this place, they were able to put to sea again. On setting out from 75° 40′, they encountered

a vast expanse of water free from ice, and penetrated, without much danger, beyond the 78° of latitude, to the entrance of the strait, which prolonged northwards the immense bay which they had just traversed, and which received the name of Baffin. Then turning to the west, and afterwards to the southwest, Byleth and Baffin discovered the Carey Islands, Jones Strait, Coburg Island, and Lancaster Strait, and afterwards they descended along the entire western shore of Baffin's Bay as far as Cumberland Land. Despairing then of being able to carry his discoveries further, Byleth, who had several men among his crew afflicted with scurvy, found himself obliged to return to the shores of England, where he disembarked at Dover, on August 30th.

If this expedition terminated again in failure, in the sense that the northwest passage was not discovered, the results obtained were nevertheless considerable. Byleth and Baffin had prodigiously increased the knowledge of the seas and coasts in the quarters of Greenland. The captain and the pilot, in writing to the Director of the Company, assured him that the bay which they had visited was an excellent spot for fishing, in which thousands of whales, seals, and walruses, disported themselves. The event could not be long in amply proving the correctness of this information.

Let us now descend again upon the coast of America, as far as Canada, and see what had happened since the time of Jacques Cartier. This latter, we may remember, had made an attempt at colonization, which had not produced any important results. Nevertheless, some Frenchmen had remained in the country, had married there, and founded families of colonists. From time to time, they received reinforcements brought by fishing vessels from Dieppe or St. Malo. But it was difficult to establish a current of emigration. It was under these circumstances that a gentleman, named Samuel de Champlain, a veteran of the wars of Henry IV., and who, for two years and a half, had frequented the East Indies, was engaged by the Commander of Chastes with the Sieur de Pontgravé, to continue the discoveries of Jacques Cartier, and to choose the situations most favorable for the establishment of towns and centers of population. This is not the place for us to consider the manner in which Champlain understood the busi-

ness of a colonizer, nor his great services, which might well entitle him to be called the father of Canada. We will, therefore, advisedly leave this aspect of his undertaking, not the least brilliant, in order simply to occupy ourselves with the discoveries which he effected in the interior of the continent.

Setting sail from Honfleur, on March 15th, 1603, the two chiefs of the enterprise first ascended the St. Lawrence, as far as the harbor of Tadoussac, 240 miles from its mouth. They were welcomed by the populations, which had, however, "neither faith, nor law, and lived without God, and without religion, like brute beasts." At this place they quitted their ships, which could not have advanced further without danger, and reached in a boat the Fall of St. Louis, where Jacques Cartier had been stopped; they even penetrated a little into the interior, and then returned to France, where Champlain printed a narrative of the voyage for the king.

Henry IV. resolved to continue the enterprise. In the meantime M. de Chastes having died, his privilege was transferred to M. de Monts, with the title of Vice-admiral and Governor of Acadia. Champlain accompanied M. de Monts to Canada, and passed three whole years, whether in aiding by his counsels and his exertions the efforts of colonization, or in exploring the coasts of Acadia, the bearings of which he took beyond Cape Cod, or in making excursions into the interior and visiting the savage tribes which it was important to conciliate. In 1607, after a new voyage to France to recruit colonists Champlain returned again to New France, and founded, in 1608, a town which was to become Quebec. The following year was devoted to again ascending the St. Lawrence, and ascertaining its course. On board of a pirogue, with two companions only, Champlain penetrated, with some Algonquins, to the Iroquois, and remained conqueror in a great battle fought on the borders of a lake which has received his name; he then descended the river Richelieu, as far as the St. Lawrence. In 1610, he made a fresh incursion into the territory of the Iroquois, at the head of his allies, the Algonquins, whom he had the greatest possible difficulty in making observe the European discipline. In this campaign he employed instruments of warfare which greatly

astonished the savages, and easily secured him the victory. For the attack of a village, he constructed a cavalier of wood, which 200 of the most powerful men "carried before this village to within a pike's length, and displayed three arquebusiers well protected from the arrows and stones which might be shot or launched at them." A little later, we see him exploring the river Ottawa, and advancing, in the north of the continent, to within 225 miles of Hudson's Bay. After having fortified Montreal, in 1615, he twice ascended the Ottawa, explored Lake Huron, and arrived by land at Lake Ontario, which he crossed.

It is very difficult to divide into two parts a life so occupied as Champlain's. All his excursions, all his reconnaissances, had but one object, the development of the work to which he had consecrated his existence. Thus detached from what gives them their interest, they appear to us unimportant; and yet if the colonial policy of Louis XIV. and his successor had been different, we should possess in America a colony which assuredly would not yield in prosperity to the United States. Notwithstanding our abandonment, Canada has preserved a fervent love for the mother country.

We must now leap over a period of forty years, to arrive at Robert Cavelier de la Salle. During this time, the French establishments have acquired some importance in Canada, and have extended themselves over a great part of North America. Our hunters and trappers scour the woods, and bring, every year, with their load of furs, new information respecting the interior of the continent. In this latter task they are powerfully seconded by the missionaries, in the first rank of whom we must place Father Marquette, whom the extent of his voyages on the Great Lakes and as far as the Mississippi marks out for special acknowledgment. Two men, besides, deserve to be mentioned for the encouragements and facilities which they afforded to the explorers, viz., M. de Frontenac, Governor of New France, and Talon, intendant of justice and police. In 1678 there arrived in Canada, without any settled purpose, a young man named Cavelier de la Salle. "He was born at Rouen," says Father Charlevoix, "of a family in easy circumstances; but having passed some years with the Jesuits, he had had no share in the inheritance of his par-

ents. He had a cultivated mind, he wished to distinguish himself, and he felt within himself sufficient genius and courage to ensure success. In reality, he was not deficient in resolution to enter upon, nor in perseverance to follow up, an undertaking, nor in firmness in contending against obstacles, nor in resource to repair his losses; but he knew not how to make himself loved, nor how to manage those of whom he stood in need, and when he had attained authority, he exercised it with harshness and arrogance. With such defects he could not be happy, and in fact he was not."

Father Charlevoix's portrait appears to us somewhat too black, and he does not seem to estimate at its true value the great discovery which we owe to Cavelier de la Salle; a discovery, which has nothing like it, we do not say equal to it, except that of the river Amazon, by Orellana, in the sixteenth century, and that of the Congo, by Stanley, in the nineteenth. However this may be, no sooner had he arrived in the country, than he set himself, with extraordinary application, to study the native idioms, and to associate with the savages in order to render himself familiar with their manners and habits. At the same time he gathered from the trappers a mass of information on the situation of the rivers and lakes. He communicated his projects of exploration to M. de Frontenac, who encouraged him, and gave him the command of a fort constructed at the outlet of the lake into the St. Lawrence. In the meantime, one Jolyet arrived at Quebec. He brought the news that in company with Father Marquette and four other persons, he had reached a great river called the Mississippi, flowing towards the south. Cavelier de la Salle very soon understood what advantage might be derived from an artery of this importance, especially if the Mississippi had, as he believed, its mouth in the Gulf of Mexico. By the lakes and the Illinois, an affluent of the Mississippi, it was easy to effect a communication between the St. Lawrence, and the Sea of the Antilles. What marvelous profit would France derive from this discovery! La Salle explained the project which he had conceived to the Count of Frontenac, and obtained from him very pressing letters of recommendation to the Minister of Marine. On arriving in France, La Salle learned the death of Colbert; but he

remitted to his son, the Marquis of Seignelay, who had succeeded him, the despatches of which he was the bearer. This project, which appeared to rest upon solid foundations, could not fail to please a young minister. Accordingly, Seignelay presented La Salle to the king, who caused letters of nobility to be prepared for him, granted him the Seignory of Catarocouy, and the government of the fort which he had built, with the monopoly of commerce in the countries which he might discover.

La Salle had also found means to procure the patronage of the Prince de Conti, who asked him to take with him the Chevalier Tonti, son of the inventor of the Tontine, in whom he felt an interest. He was for La Salle a precious acquisition. Tonti, who had made a campaign in Sicily, where his hand had been carried off by the explosion of a grenade, was a brave and skillful officer, who always showed himself extremely devoted.

La Salle and Tonti embarked at Rochelle, on July 14th, 1678, carrying with them about thirty men, workmen and soldiers, and a Recollet (monk), Father Hennepin, who accompanied them in all their voyages.

Then La Salle, being conscious that the execution of his project required more considerable resources than those which were at his disposal, constructed a boat upon the Lake Erie, and devoted a whole year to scouring the country, visiting the Indians, and carrying on an active trade in furs, which he stored in his fort of Niagara, while Tonti pursued the same course in other directions. At length, towards the middle of August, of the year 1679, his boat, the *Griffon,* being prepared for sailing, he embarked on the Lake Erie, with thirty men, and three Fathers, Recollets, for Machillimackinac. In crossing the lakes St. Clair and Huron, he experienced a violent storm, which caused the desertion of some of his people, whom, however, Tonti brought back to him. La Salle arrived at Machillimackinac, and very soon entered the Green Bay. But during this time his creditors at Quebec had sold all that he possessed, and the *Griffon,* which he had despatched, laden with furs, to the fort of Niagara, was either lost or pillaged by the Indians; which of these took place has never been precisely ascertained. For himself, although the departure of the *Griffon* had displeased his companions, he

continued his route, and reached the river St. Joseph, where he found an encampment of Miamis, and where Tonti speedily rejoined him. Their first care was to construct a fort on this spot. Then they crossed the dividing line of the water between the basin of the great lakes, and that of the Mississippi; they subsequently reached the river of the Illinois, an affluent on the left of that great river. With his small band of followers, upon whose fidelity he could not entirely depend, the situation of La Salle was critical, in the midst of an unknown country, and among a powerful nation, the Illinois, who, at first allies of France, had been prejudiced and excited against us by the Iroquois and the English, jealous of the progress of the Canadian colony.

Nevertheless, it was necessary, at all costs, to attach to himself these Indians, who, from their situation, were able to hinder all communication between La Salle and Canada. In order to strike their imagination, Cavelier de la Salle proceeds to their encampment, where more than 3,000 men are assembled. He has but twenty men, but he traverses their village haughtily, and stops at some distance. The Illinois, who have not yet declared war, are surprised. They advance towards him, and overwhelm him with pacific demonstrations. So versatile is the spirit of the savages! Such an impression does every mark of courage make upon them! Without delay, La Salle takes advantage of their friendly dispositions, and erects upon the very site of their camp, a small fort, which he calls Crèvecœur, in allusion to the troubles which he has already experienced. There he leaves Tonti with all his people, and he himself, anxious about the fate of the *Griffon*, returns with three Frenchmen and one Indian, to the fort of Catarocouy, separated by 500 leagues from Crèvecœur. Before setting out, he had detached with Father Hennepin, one of his companions named Dacan, on a mission to reascend the Mississippi, beyond the river of the Illinois, and if possible, to its source. "These two travelers," says Father Charlevoix, "set out from the fort of Crèvecœur, on February 28th, and having entered the Mississippi, ascended it as far as 46° of north latitude. There they were stopped by a considerable waterfall, extending quite across the river, to which Father Hennepin gave the name of St. Anthony

of Padua. Then they fell, I know not by what mischance, into the hands of the Sioux, who kept them for a long time prisoners."

On his journey back to Catarocouy, La Salle, having discovered a new site appropriate to the construction of a fort, summoned Tonti thither, who immediately set to work, while La Salle continued his route. This is Fort St. Louis. On his arrival at Catarocouy, La Salle learned news which would have broken down a man of a less hardy temperament. Not only had the *Griffon,* on board of which he had furs of the value of 10,000 crowns, been lost, but a vessel which was bringing him from France a cargo worth 80*l.* had been shipwrecked, and his enemies had spread a report of his death. Having no further business at Catarocouy, and having proved by his presence that the reports of his disappearance were all false, he arrived again at the fort of Crèvecœur, where he was much astonished to find no one.

This is what had happened. While the Chevalier Tonti was employed in the construction of Fort St. Louis, the garrison of Fort Crèvecœur had mutinied, had pillaged the magazines, had done the same at Fort Miami, and then fled to Machillimackinac. Tonti, almost alone in face of the Illinois, who were roused against him by the depredations of his men, and judging that he could not resist in his fort of Crèvecœur, had left it on September 11th, 1680, with the five Frenchmen who composed his garrisbn, and had retired as far as the bay of the Lake Michigan. After having placed a garrison at Crèvecœur and at Fort St. Louis, La Salle came to Machillimackinac, where he rejoined Tonti, and together they set out again from thence towards the end of August for Catarocouy, whence they embarked on the Lake Erie with fifty-five persons, on August 28th, 1681. After a journey of 240 miles along the frozen river of the Illinois, they reached Fort Crèvecœur, where the water, free from ice, permitted the use of their canoes. On February 6th, 1682, La Salle arrived at the confluence of the Illinois and the Mississippi. He descended the river, sighted the mouth of the Missouri, and that of the Ohio, where he raised a fort, penetrated into the country of the Arkansas, of which he took possession in the name of France, crossed the country of the Natchez, with whom he

made a treaty of friendship, and finally passed out into the Gulf of Mexico on April 9th, after a navigation of 1,050 miles in a mere bark. The anticipations so skillfully conceived by Cavelier de la Salle, were realized. He immediately took formal possession of the country, to which he gave the name of Louisiana, and called the immense river which he had just discovered the St. Louis.

La Salle's return to Canada occupied not less than one year and a half. There is no ground for astonishment, when all the obstacles scattered in his path are considered. What energy, what strength of mind were requisite in one of the greatest travelers of whom France has reason to be proud, to succeed in such an enterprise!

Unhappily, a man, otherwise well intentioned, but who allowed himself to be prejudiced against La Salle by his numerous enemies, M. Lefèvre de la Barre, who had succeeded M. de Frontenac as governor of Canada, wrote to the Minister of Marine, that the discoveries of La Salle were not to be regarded as of much importance. "This traveler," he said, "was actually, with about twenty French vagabonds and savages, at the extremity of the bay, where he played the part of sovereign, plundered and ransomed those of his own nation, exposed the people to the incursions of the Iroquois, and covered all these acts of violence with the pretext of the permission, which he had from His Majesty, to carry on commerce alone in the countries which he might be able to discover."

Cavelier de la Salle could not allow himself to remain exposed to these calumnious imputations. On the one side, honor prompted him to return to France to exculpate himself; on the other, he would not leave others to reap the profit of his discoveries. He set out, therefore, and received from Seignelay a kindly welcome. The minister had not been much influenced by the letters of M. de la Barre; he was aware that men could not accomplish great achievements without wounding much self-love, nor without making numerous enemies. La Salle took the opportunity to explain to him his project of discovering the mouth of the Mississippi by sea, in order to open a way for French vessels, and to found an establishment there. The minister entered into these views, and gave him a commission which placed Frenchmen and savages under his

orders, from Fort St. Louis to the sea. At the same time the commandant of the squadron which was to transport him to America, was to be under his authority, and to furnish him on his disembarkation with all the succors which he might require, provided that nothing was done to the prejudice of the king. Four vessels, one of them a frigate of forty guns, commanded by M. de Beaujeu were to carry 280 persons, including the crews, to the mouth of the Mississippi, to form the nucleus of the new colony. Soldiers and artisans had been very badly chosen, as was perceived when too late, and no one knew his business. Setting sail from La Rochelle, on July 24th, 1684, the little squadron was almost immediately obliged to return to port, the bowsprit of the frigate having broken suddenly in the very finest weather. This inexplicable accident was the commencement of misunderstanding between M. de Beaujeu and M. de la Salle. The former could scarcely be pleased to see himself subordinated to a private individual, and did not forgive Cavelier this. Nothing however would have been more easy than to decline the command. La Salle had not the gentleness of manner and the politeness necessary to conciliate his companions. The disagreement did but gather force during the voyage by reason of the obstacles raised by M. de Beaujeu to the rapidity and secrecy of the expedition. The annoyances of La Salle had indeed become so great when he arrived at St. Domingo, that he fell seriously ill. He recovered, however, and the expedition set sail again on November 25th. A month later, it was off Florida; but, as "La Salle had been assured that in the Gulf of Mexico, all the currents bore eastwards, he did not doubt that the mouth of the Mississippi must be far to the west; an error which was the source of all his misfortunes."

La Salle then steered to the west, and passed by, without perceiving it, without deigning even to attend to certain signs which he was asked to observe, the mouth of the Mississippi. When he perceived his mistake, and entreated M. de Beaujeu to turn back, the latter would no longer consent. La Salle, seeing that he could make no impression upon the contradictory mind of his companion, decided to disembark his men and his provisions in the Bay of St. Bernard. Yet, in this very last act, Beaujeu mani-

fested an amount of culpable ill-will, which did as little honor to his judgment as to his patriotism. Not only was he unwilling to land all the provisions, under the pretext that certain of them being at the bottom of the hold, he had no time to change his stowage, but further he gave shelter on board his own ship to the master and crew of the transport, laden with the stores, utensils, and implements necessary for a new establishment, people whom everything seems to convict of having purposely cast their vessel upon shore. At the same time, a number of savages took advantage of the disorder caused by the shipwreck of the transport, to plunder everything on which they could lay their hands. Nevertheless, La Salle, who had the talent of never appearing depressed by misfortune, and who found in his own genius resources adapted to the circumstances of the case, ordered the works of the establishment to be begun. In order to give courage to his companions, he more than once took part with his own hands in the work; but very slow progress was made, in consequence of the ignorance of the workmen. Struck with the resemblance of the language and habits of the Indians of these parts to those of the Mississippi, La Salle was very soon persuaded that he was not far distant from that river, and made several excursions in order to approach it. But, if he found a country beautiful and fertile, he did not make progress towards what he was in search of. He returned each time to the fort more gloomy and more harsh; and this was not the way to restore calm to spirits embittered by sufferings and the inutility of their efforts. Grain had been sown; but scarcely any came up for want of rain, and what had sprung up was soon laid waste by the savages and the deer. The hunters who wandered far from the camp were massacred by the Indians, and sickness found an easy prey in men overwhelmed with ennui, disappointment, and misery. In a short time, the number of the colonists fell to thirty-seven. At length, La Salle resolved to try a last effort to reach the Mississippi, and in descending the river to seek help from the nations with which he had made alliance. He set out on January 12th, 1687, with his brother, his two nephews, two missionaries, and twelve colonists. He was approaching the country of the Shawnees, when, in consequence of an altercation between

one of his nephews and three of his companions, these latter assassinated the young man and his servant during their sleep, and resolved immediately to do the same with the chief of the enterprise. De la Salle, uneasy at not seeing his nephew return, set out to seek him on the morning of the 19th, with Father Anastase. The assassins, seeing him approach, lay in ambush in a thicket, and one of them shot him in the head, and stretched him on the ground stark dead. Thus perished Cavelier de la Salle, "a man of a capacity," says Father Charlevoix, "of a largeness of mind, of a courage and firmness of soul, which might have led him to the achievement of something great, if with so many great qualities, he had known how to master his gloomy and atrabilious disposition, and to soften the severity or rather the harshness of his nature. . . ." Many calumnies had been spread abroad against him; but it is necessary so much the more to be on our guard against all these malevolent reports "as it is only too common to exaggerate the defects of the unfortunate, to impute to them even some which they had not, especially when they have given occasion for their misfortune, and have not known how to make themselves beloved. What is sadder for the memory of this celebrated man, is that he has been regretted by few persons, and that the ill-success of his undertakings—only of his last—has given him the air of an adventurer, among those who judge only by appearances. Unhappily, these are usually the most numerous, and in some degree the voice of the public."

We have but little to add to these last wise words. La Salle knew not how to obtain pardon for his first success. We have related subsequently by what concurrences of circumstances his second enterprise miscarried. He died, the victim it may be said, of the jealousy and malevolence of the Chevalier de Beaujeu. It is to this slight cause that we owe the failure to found in America a powerful colony, which would very soon have been found in a condition to compete with the English establishments.

Thus then, at the end of the seventeenth century, a great part of the new world was known. In North America, Canada, the shores of the Atlantic and of the Gulf of Mexico, the valley of the Mississippi, the coasts of California and of New Mexico, were discovered or colonized.

All the central part of the continent, from Rio del Norte, as far as Terra Firma, was subject, at least nominally, to the Spaniards. In the south, the savannahs and the forests of Brazil, the pampas of the Argentine, and the interior of Patagonia, escaped the observation of the explorers, as they were destined to do for a long time yet.

In Africa, the long line of coasts, which are washed by the Atlantic and the Indian Oceans, had been patiently followed and observed by navigators. At some points only, colonists and missionaries had tried to penetrate the mystery of this vast continent. Senegal, Congo, the valley of the Nile, and Abyssinia, were all that were known with some degree of detail and of certainty.

If many of the countries of Asia, surveyed by the travelers of the middle ages, had not been revisited since that epoch, we had carefully explored the whole anterior part of that continent. India had been revealed to us, we had even founded some establishments there, China had been touched by our missionaries; and Japan, that famous Cipango which had exercised so great an attraction for our travelers of the preceding age, was at length known to us. Only Siberia and the whole northeast angle of Asia had escaped our investigations, and it was not yet known whether America was not connected with Asia, a mystery which was before long to be cleared up.

In Oceania, a number of archipelagoes, of islands and separate islets, remained still to be discovered, but the islands of Sunda were colonized, the coasts of Australia and of New Zealand had been partially revealed, and the existence of that great continent, which, according to Tasman, extended from Terra del Fuego to New Zealand, began to be doubted; but it still required the long and careful researches of Cook to banish definitely into the domain of fable a chimera so long cherished.

Geography was on the point of transforming itself. The great discoveries made in astronomy were about to be applied to geography. The labors of Fernel and above all of Picard, upon the measure of a terrestrial degree between Paris and Amiens, had made it clear that the globe is not a sphere, but a spheroid, that is to say, a ball flattened at the poles and swollen at the equator, and thus were found at one stroke the form and the dimensions of

the world which we inhabit. At length the labors of Picard, continued by La Hire and Cassini, were completed at the commencement of the following century. The astronomical observations, rendered possible by the calculation of the satellites of Jupiter, enabled us to rectify our maps. If this rectification had been already effected with regard to certain places, it became indispensable when the number of points of which the astronomical position had been observed, had been considerably increased; and this was to be the work of the next century. At the same time, historical geography was more studied; it began to take for its foundation the study of inscriptions, and archæology was about to become one of the most useful instruments of comparative geography.

In a word, the seventeenth century is an epoch of transition and of progress; it seeks and it finds the powerful means which its successor, the eighteenth century, was destined to put into operation. The era of the sciences has already opened, and with it the modern world commences.

END OF THE SECOND BOOK

The Exploration of the World

BOOK III

Scientific Exploration

(The Eighteenth Century)

Scientific Exploration

(The Eighteenth Century)

CHAPTER I

ASTRONOMERS AND CARTOGRAPHERS

BEFORE we enter upon a recital of the great expeditions of the eighteenth century, we shall do well to chronicle the immense progress made during that period by the sciences. They rectified a crowd of prejudices and established a solid basis for the labors of astronomers and geographers. If we refer solely to the matter before us, they radically modified cartography, and ensured for navigation a security hitherto unknown.

Although Galileo had observed the eclipses of Jupiter's satellites as early as 1610, his important discovery had been rendered useless by the indifference of governments, the inadequacy of instruments, and the mistakes committed by his followers.

In 1660 Jean Dominique Cassini published his "Tables of the Satellites of Jupiter," which induced Colbert to send for him the following year, and which obtained for him the superintendence of the Paris Observatory.

In the month of July, 1671, Philippe de la Hire went to Uraniborg in the Island of Huen, to take observations for the situation of Tycho Brahe's Observatory. In that spot he calculated with the assistance of Cassini's Tables, and with an exactitude never before obtained, the difference between the longitudes of Paris and Uraniborg.

The Academy of Sciences sent the astronomer Jean Richter the same year to Cayenne, to study the parallaxes of the sun and moon, and to determine the distance of Mars and Venus from the earth. This voyage, which was entirely successful was attended with unforeseen consequences, and resulted in inquiries shortly after entered into as to the shape of the earth. Richter noticed that the pendulum lost two minutes, twenty-eight seconds at Cayenne, which proved

that the momentum was less at this place than at Paris. From this fact, Newton and Huyghens deduced the flatness of the globe at the poles.

Shortly afterwards, however, the computation of a terrestrial degree given by Abbé Picard, and the determination of the meridional arc, arrived at by the Cassinis, father and son, led scientific men to an entirely different result, and induced them to consider the earth an elliptical figure, elongated towards the polar regions. Passionate discussions arose from this decision, and in them originated immense undertakings, from which astronomical and mathematical geography profited.

Picard undertook to estimate the space contained between the parallels of Amiens and Malvoisine, which comprises a degree and a third. The Academy, however, decided that a more exact result could be obtained by the calculation of a greater distance, and determined to portion out the entire length of France, from north to south, in degrees. For this purpose, they selected the meridian line which passes the Paris Observatory. This gigantic trigonometrical undertaking was commenced twenty years before the end of the seventeenth century, was interrupted, and recommenced, and finally finished towards 1720.

At the same time Louis XIV., urged by Colbert, gave orders for the preparation of a map of France. Men of science undertook voyages from 1679 to 1682, and by astronomical observations found the position of the coasts on the ocean and the Mediterranean. But even these undertakings, Picard's computation of the meridional arc, the calculations which determined the latitude and longitude of certain large cities in France, and a map which gave the environs of Paris in detail with geometrical exactitude, were still insufficient data for a map of France. As in the measurement of the meridional arc, the only course to adopt was to cover the whole extent of the country with a network of triangles. Such was the basis of the large map of France which justly bears the name of Cassini.

The result of the earlier observations of Cassini and La Hire was to restrict France within much narrower limits than had hitherto been assigned to her.

Desborough Cooley in his *History of Voyages,* says:

"They deprived her (France) of several degrees of

longitude in the length of her western coast, from Brittany to the Bay of Biscay. And in the same way retrenched about half a degree from Languedoc and La Provence. These alterations gave rise to a 'bon-mot.' Louis the XIV., in complimenting the Academicians upon their return, remarked: 'I am sorry to see, gentlemen, that your journey has cost me a good part of my kingdom!'"

So far, however, cartographers had ignored the corrections made by astronomers. In the middle of the seventeenth century, Peiresc and Gassendi had corrected upon the maps of the Mediterranean a difference of "five hundred" miles of distance between Marseilles and Alexandria. This important rectification was set aside as non-existent until the hydrographer, Jean Matthieu de Chazelles, who had assisted Cassini in his labors, was sent to the Levant to draw up a coast chart for the Mediterranean.

"It was sufficiently clear," say the Memoirs of the Academy of Sciences, that the maps unduly extended the continents of Europe, Africa, and America, and narrowed the Pacific Ocean between Asia and Europe.

These errors had caused singular mistakes.

During M. de Chaumont's voyage, when he went as Louis XIV.'s ambassador to Siam, the pilots, trusting to their charts, were mistaken in their calculations, and both in going and in returning went a good deal further than they imagined. In proceeding from the Cape of Good Hope to the Island of Java they imagined themselves a long way from the Strait of Sunda, when in reality they were more than sixty leagues beyond it. And they were forced to put back for two days with a favorable wind to enter it. In the same way upon their return voyage from the Cape of Good Hope to France, they found themselves at the island of Flores, the most western of the Azores, when they conceived themselves to be at least a hundred and fifty leagues eastward of it. They were obliged to navigate for twelve days in an easterly direction in order to reach the French coast.

William Delisle was the first to construct new maps, and to make use of modern discoveries. He arbitrarily rejected all that had been done before his time. His enthusiasm was so great that he had entirely carried out his project at the age of twenty-five. His brother, Joseph Nicolas, who

taught astronomy in Russia, sent William materials for his maps. At the same time his younger brother, Delisle de la Ceyére, visited the coast of the Arctic Ocean, and astronomically fixed the position of the most important points. He embarked on board De Behring's vessel and died at Kamtchatka. That was the work of the three Delisles, but to William belongs the glory of having revolutionized geography.

"He succeeded," says Cooley, "in reconciling ancient and modern computations, and in collecting an immense mass of documents. Instead of limiting his corrections to any one quarter of the earth, he directed them to the entire globe. By this means he earned the right to be considered the founder of modern geography.

Peter the Great, on his way to Paris, paid a tribute to his merit by visiting him, and placing at his disposal all the information he himself possessed of the geography of Russia.

We must now speak of two important expeditions, which ought to have settled the animated discussion as to the shape of the earth. The Academy of Sciences had despatched a mission to America, to compute the arc of the meridian at the equator.

It was decided to entrust a similar expedition to the north to Maupertuis. The expedition embarked in a vessel equipped at Dunkerque. In addition to Maupertuis, it comprised De Clairaut, Camus, and Lemonnier, Academicians, Albey Outhier, canon of Bayeux, a secretary named Sommereux, a draughtsman, Herbelot, and the scientific Swedish astronomer, Celsius.

When the King of Sweden received the members of the mission at Stockholm, he said to them, "I have been in many bloody battles, but I should prefer finding myself in the midst of the most sanguinary, rather than join your expedition."

Certainly, it was not likely to prove a party of pleasure. The learned adventurers were to be tested by difficulties of every kind, by continued privation, by excessive cold. But what comparison can be made between their sufferings, and the agonies, the trials and the dangers which were to be encountered by the Arctic explorers, Ross, Parry, Hall, Payer, and many others?

Damiron in his Eulogy of Maupertuis, says: "The houses at Tornea, north of the Gulf of Bothnia, almost in the Arctic Circle, are hidden under the snow. When one goes out, the air seems to pierce the lungs, the increasing degrees of frost are proclaimed by the incessant crackling of the wood, of which most of the houses are built. From the solitude which reigns in the streets, one might fancy that the inhabitants of the town were dead. At every step one meets mutilated figures, people who have lost arms or legs from the terrible severity of the temperature. And yet, the travelers did not intend pausing at Tornea."

Nowadays these portions of the globe are better known, and the region of the Arctic climate thoroughly appreciated, which makes it easier to estimate the difficulties the inquirers encountered.

They commenced their operations in July, 1736. Beyond Tornea they found only uninhabited regions. They were obliged to rely upon their own resources for scaling the mountains, where they placed the signals intended to form the uninterrupted series of triangles. Divided into two parties in order thus to obtain two measurements instead of one, and thereby also to diminish the chance of mistakes, the adventurous savants, after inconceivable hairbreadth escapes, of which an account can be found in the Memoirs of the Academy of Sciences for 1737, and after incredible efforts, decided that the length of the meridian circle, comprised between the parallels of Tornea and Kittis was 55,023 fathoms and a half. Thus below the Polar circle, the meridian degree comprised a thousand fathoms more than Cassini had imagined, and the terrestrial degree exceeded by 377 fathoms the length which Picard has reckoned it between Paris and Amiens.

The result, therefore, of this discovery (a result long repudiated by the Cassinis, both father and son), was that the earth was considerably flattened at the poles.

Meantime the mission dispatched by the Academy to Peru proceeded with analogous operations. It consisted of La Condamine, Bouguer, and Godin, three Academicians, Joseph de Jussieu, Governor of the Medical College, who undertook the botanical branch, Seniergues, a surgeon, Godin des Odonais, a clock-maker, and a draughtsman. They started from La Rochelle, on the 16th of May, 1635.

Upon reaching St. Domingo, they took several astronomical observations, and continued by way of Porto Bello, and Carthagena. Crossing the Isthmus of Panama, they disembarked at Manta in Peru, upon the 9th of March, 1736.

Arrived there, Bouguer and Condamine parted from their companions, studied the rapidity of the pendulum, and finally reached Quito by different routes. Condamine pursued his way along the coast, as far as Rio de las Esmeraldas, and drew the map of the entire country, which he traversed with such infinite toil. Bouguer went southwards towards Guayaquil, passing through marshy forests, and reaching Caracol at the foot of the Cordillera range of the Andes, which he was a week in crossing. This route had been previously taken by Alvarado, when seventy of his followers perished; amongst them, the three Spaniards who had attempted to penetrate to the interior. Bouguer reached Quito on the 10th of June. At that time this city contained between thirty and forty thousand inhabitants, and boasted of an episcopal president of the Assembly, and numbers of religious communities, besides two colleges.

Living there was cheap, with the exception of foreign merchandises, which realized exorbitant prices, so much so indeed, that a glass goblet fetched from eighteen to twenty francs.

The adventurers scaled the Pichincha, a mountain near Quito the eruptions from which had more than once been fatal to the inhabitants, but they were not slow in discovering that they could not succeed in carrying their implements to the summit of the mountains, and that they must be satisfied with placing the signals upon the hills.

"An extraordinary phenomenon may be witnessed almost every day upon the summit of these mountains," said Bouguer in the account he read before the Academy of Sciences, "which is probably as old as the world itself, but which it appeared was never witnessed by anyone before us. We first remarked it when we were all together upon a mountain called Pamba Marca. A cloud in which we had been enveloped, and which dispersed, allowed us a view of the rising sun, which was very brilliant. The cloud passed on, it was scarcely removed thirty paces when each of us distinguished his own shadow reflected above him, and saw only his own, because the cloud presented a broken surface.

"The short distance allowed us fully to recognize each part of the shadow; we distinguished the arms, the legs, the head, but we were most amazed at finding that the latter was surrounded by a glory, or aureole formed of two or three small concentric crowns of a very bright color, containing the same variety of hues as the rainbow, red being the outer one. The spaces between the circles were equal, the last circle the weakest, and in the far distance, we perceived one large white one, which surrounded the whole. It produced the effect of a transfiguration upon the spectator."

The instruments employed by these scholars were not as accurate as more modern ones, and varied with changes of temperature, in consequence of which, they were forced to proceed most carefully, and with most minute accuracy, lest small errors accumulating should end by leading to greater ones. Thus, in their trigonometrical surveys Bouguer and his associates never calculated the third angle by the observation of the two first, but always observed all three.

Having calculated the number of fathoms contained in the extent of country surveyed, the next point was to discover what part this was of the earth's circumference, which could only be ascertained by means of astronomical observations.

After numerous obstacles, which it is impossible to give in detail, after curious discoveries, as for example, the attraction exercised on the pendulum by mountains, the French inquirers arrived at conclusions which fully confirmed the result of the expedition to Lapland. They did not all return to France at the same time.

Jussieu continued his search after facts in natural history, and La Condamine decided to return by way of the Amazon River, making an important voyage.

CHAPTER II

ENGLISH PRIVATEERS

THE war of the Spanish succession was at its height, when some privateers of Bristol determined to fit out ships to attack the Spanish vessels, in the Pacific Ocean, and to devastate the coasts of South America. The two vessels chosen, the *Duke* and *Duchess*, under Captains Rogers and Courtenay, were carefully equipped, and stocked with

everything necessary for so long a voyage, the famous Dampier, who had acquired a great reputation by his daring adventures and piracies, did not disdain to accept the title of chief pilot, and although this trip was richer in material results than in geographical discoveries, the account of it contains a few curious particulars worthy of preservation.

The *Duke* and *Duchess* set sail from the Royal Port of Bristol on the 2nd of April, 1708. To begin with, we may note one interesting fact. Throughout the voyage a register was at the service of the crew, in which all the incidents of the voyage were to be noted, so that the slightest errors, and the most insignificant oversights could be rectified before the facts of the case faded from memory.

Nothing of note occurred on this voyage till the 22nd of December, when the Falkland Islands, previously noticed by few navigators, were discovered. Rogers did not land on them, but contented himself with observing that the coast, although less precipitous, resembled that of Portland. "All the hills," he added, "with their well-wooded and gradually sloping sides, appeared fertile, and the shore is not wanting in good harbors."

Now these islands do not possess a single tree, and the good harbors, as we shall presently see, are anything but numerous, so we can judge of the exactitude of the observations made by Rogers. Navigators have done well not to trust to them.

After passing this archipelago the two vessels steered due south, and penetrated as far as south lat. 60° 58′. Here, there was no night, the cold was intense, and the sea so rough that the *Duchess* sustained a few injuries. The chief officers of the two vessels assembled in council, agreed that it would be better not to attempt to go further south, and the course was changed for the west. On the 15th of January, 1709, Cape Horn is said to have been doubled, and the southern ocean entered.

Up to this date the position of the island of Juan Fernandez, was differently given on nearly all maps, and Wood Rogers, who intended to harbor there, take in water, and get a little fresh meat, came upon it almost unawares.

On the 1st of February, he embarked in a little boat to try and find an anchorage. Whilst his people were await-

ing his return, a large fire was noticed on shore. Had some Spanish or French vessels cast anchor here? Would it be necessary to fight for the water and food required? Every preparation was made during the night, but in the morning no ship was in sight. Conjectures were already being hazarded as to whether the enemy had retired, when the end was put to all surmises by the return of the boat, bringing in it a man clad in goatskins, whose personal appearance was yet more savage than his garments.

It was a Scotch mariner, Alexander Selkirk by name, who in consequence of a quarrel with the captain of his ship, had been left on this desert island four years and a half before. The fire which had attracted notice had been lighted by him. During his stay on the island of Juan Fernandez, Selkirk had seen many vessels pass, but only two, both Spanish, had cast anchor. Discovered by the sailors, Selkirk had been fired upon, and only escaped death by the agility with which he managed to climb into a tree and hide.

He told how he had been put ashore with his clothes, his bed, a pound of powder, some bullets, a little tobacco, a hatchet, a knife, a kettle, a Bible, with a few other devotional books, his nautical instruments and books. Poor Selkirk provided for his wants as best he could, but during the first few months he had great difficulty in conquering the sadness and mastering the horror consequent upon his terrible loneliness. He built two huts of willow, which he covered with a sort of rush, and lined with the skins of the goats he killed to satisfy his hunger, so long as his ammunition lasted. When it was likely to fail, he managed to strike a light by rubbing two pieces of pimento wood together. When he had quite exhausted his ammunition, he caught the goats as they ran, his agility had become so great by dint of constant exercise, that he scoured the woods, rocks, and hills, with a perfectly incredible speed. We had sufficient proof of his skill, when he went hunting with us. He outran and exhausted our best hunters, and an excellent dog which we had on board; he easily caught the goats, and brought them to us on his back. He himself related to us, that one day he chased his prey so eagerly to the edge of a precipice, which was concealed by bushes, that they rolled over and over together, until they reached

the bottom. He lost consciousness through that fall, and upon discovering that the goat lay under him quite dead, after remaining where he was for twenty-four hours, he with the utmost difficulty succeeded in crawling to his cabin, which was about a mile distant; and he was unable to walk again for six days.

This deserted wretch managed to season his food with the turnips sown by the crew of a ship, with cabbages, capsicums, and allspice. When his clothes and shoes were worn out, a process which occupied but a short time, he ingeniously constructed new ones of goatskin, sewing them together with a nail, which served him as a needle. When his knife was useless, he constructed a new one from the cask-hoops he found on the shore. He had so far lost the use of speech, that he could only make himself understood by an effort. Rogers took him on board, and appointed him boatswain's mate.

Selkirk was not the first sailor abandoned upon the island of Juan Fernandez. Sharp and other buccaneers have related that the sole survivor of a crew of a vessel wrecked on this coast, lived there for five years, until he was rescued by another ship.

Upon the 14th of February, the *Duke* and *Duchess* left Juan Fernandez, and commenced their operations against the Spaniards. Rogers seized Guayaquil, for which he obtained a large ransom, and captured several vessels, which, however, provided him with more prisoners than money.

This part of his voyage concerns us but little, and a few particulars only are interesting, as, for instance, his mention of a monkey in the Gorgus Island, who was so lazy, that he was nicknamed the Sluggard, and of the inhabitants of Tecamez, who repulsed the new comers with poisoned arrows, and guns. He also speaks of the Galapagos Islands, situated in two degrees of northern latitude. According to Rogers, this cluster of islands was numerous, but out of them all one only provided fresh water. Turtle-doves existed there in great quantities, and tortoises, and sea-turtles, of an extraordinary size abounded, thence the name given by the Spaniards to this group.

Sea-dogs also were common; one of them had the temerity to attack Rogers. "I was walking along the shore,"

he says, "when it left the water, his jaws gaping, as quickly and ferociously as a dog escaping from his chain. Three times he attacked me, I plunged my pike into his breast, and each time I inflicted such a wound that he fled howling horribly. Finally, turning towards me, he stopped to growl and show his fangs. Scarcely twenty-four hours earlier, one of my crew had narrowly escaped being devoured by a monster of the same family."

In December, Rogers repaired to Puerto Seguro, upon the Californian coast, with a Manilla galleon, which he had seized. Many of his men penetrated to the interior; he found large forest trees, but not the slightest appearance of culture, although smoke indicated the existence of inhabitants.

The *Duke* and *Duchess* left Porto Seguro on the 12th of January, 1710, and reached the island of Guaham, of the Mariannes, in the course of two months. Here they revictualed, and passing by the Straits of Boutan and Saleyer, reached Batavia. After a necessary delay at the latter place, and at the Cape of Good Hope, Rogers cast anchor in the Downs upon the 1st of October.

In spite of Rogers's reticence with regard to the immense riches he brought with him, a good idea of their extent may be gathered from the account of ingots, vessels of silver and gold, and pearls, with which he delighted the shipowners.

We now come to our account of Admiral Anson's voyage, which almost belongs to the category of naval warfare, but with it we may close the list of piratical expeditions, which dishonored the victors without ruining the vanquished. And if he brought no new acquisition to geography, his account teems with judicious observations, and interesting remarks about a country then little known.

The merit of them, however, if we are to believe Nichols's literary anecdotes, rests rather with Benjamin Robins, than, as the title would appear to indicate, with the chaplain of the expedition, Richard Walter. George Anson was born in Staffordshire in 1697. He was already well known as a clever and fortunate captain, when in 1739 he was offered the command of a squadron. It consisted of the *Centurion*, 60 guns, the *Gloucester* and *Severe*, each 50 guns, the *Pearl*, 40 guns, the *Wager*, 28 guns. To it

were attached also the sloop *Trial,* and two transports carrying food and ammunition. In addition to the crew of 1,460, a reinforcement of 470 marines was added to the fleet.

Leaving England on the 18th of September, 1740, the expedition proceeded by way of Madeira, past the island of St. Catharine, along the Brazilian coast, by St. Julian Harbor, and finally crossed the Strait of Lemaire.

"Terrible," said the narrative, "as the aspect of Terra del Fuego may be, that of Staten Island is more horrible still. It consists of a series of inaccessible rocks, crowned with sharp points. Prodigiously high, they are covered with eternal snow, and edged with precipices. In short, it is impossible to conceive anything more deserted, or more wild than this region."

Scarcely had the last vessels of the squadron filed through the strait, than a series of heavy gales, squalls, and storms, caused the oldest sailors to vow that all they had hitherto known of tempests were nothing in comparison. This fearful experience lasted seven weeks without intermission. The vessels sustained great damage, many men were swept away by the waves, numbers destroyed by illnesses occasioned by the exposure to constant damp, and want of sufficient nourishment.

Two of the vessels, the *Severe* and the *Pearl,* were engulfed, and four others were lost sight of. Anson was unable to reach Valdivia, the rendezvous he had selected in case of separation; carried far to the north, he could only arrest his course at Juan Fernandez, which he reached upon the 9th of June.

The *Centurion* had the greatest need of rest. She had lost eighty of her crew, her supply of water had failed, and the sailors were so weakened by scurvy, that ten only of the remaining number were available for the watch. The other vessels, in an equally bad plight, were not long in regaining her.

The first care was to restore the exhausted crews, and to repair the worst injuries sustained by the vessels. Anson sent the sick on shore and installed them in a sheltered hospital in the open air, then putting himself at the head of the most enterprising sailors, he scoured the entire island, and thoroughly examined its roads and shores. The

best anchorage, according to his report, was in Cumberland Bay. The southeastern portion of Juan Fernandez, a little island scarcely five leagues by two in extent, is dry, rocky, treeless; the ground lies low, and is level in comparison with the northern portion. It produces watercresses, purslain, sorrels, turnips, and Sicilian radishes in abundance, as well as oats and clover. Anson sowed carrots and lettuces, and planted plums, apricots, and peaches. He soon discovered that the number of goats, left by the buccaneers, and which had multiplied marvelously, had since decreased.

The Spaniards, eager to deprive their enemies of this valuable resource, had let loose a quantity of famished dogs upon the island, who chased the goats, and devoured so many of them, that, at the time of Anson's visit, scarcely two hundred remained. The Commodore, for so Anson is always called in the narrative of this voyage, reconnoitered the Island of Mas-a-Fuero, which is only twenty-five leagues west of Juan Fernandez. Smaller than the latter, it is more wooded, better watered, and possesses more goats.

At the beginning of December, the crews were sufficiently recovered for Anson to put into execution his projected attack upon the Spaniards. He commenced by seizing several ships laden with precious merchandise and ingots, and then set fire to the city of Paita. Upon this occasion the Spaniards estimated their loss at one and a half million piastres.

Anson then proceeded to Quibo Bay, near Panama, to lie in wait for the galleon which, every year, transported the treasures of the Philippine Islands to Acapulco. There, although the English met with no inhabitants in the miserable huts, they found heaps of shells and beautiful mother of pearl left there during the summer months by the fishermen of Panama.

After a fruitless cruise, Anson determined to burn three of the Spanish vessels which he had seized and equipped. Distributing the crews and cargo upon the *Centurion* and the *Gloucester,* the only two vessels remaining to him, he decided upon the 6th of May, 1742, to make for China, where he hoped to find reinforcements and supplies.

But this voyage, which he expected to accomplish in

sixty days, took him fully four months. After a violent gale, the *Gloucester*, having all but foundered, and her crew being too reduced to work her, was burned. Her cargo of silver, and her supplies were transshipped to the *Centurion*, which alone remained of all that magnificent fleet which two years earlier had set sail from England!

Thrown out of his course, far to the north, Anson discovered on the 26th of August, the Isles of Atanacan and Serigan, and the following day those of Saypan, Tinian, and Agnigan, which form a part of the Marianne Archipelago.

A Spaniard, a sergeant, whom he captured in a small bark in these seas, told him that the island of Tinian was inhabited, and abounded with cattle, fowls, and excellent fruits, such as oranges, lemons, limes, breadfruit, etc. Nowhere could the *Centurion* have found a more welcome port for her exhausted crew, now numbering only seventy-one men, worn out by privation and illness, the only survivors of the 2,000 sailors who had manned the fleet at its departure.

Even here Anson was not altogether free from anxiety. It was true that his ships were repaired, but many of his men remained on land to recover their strength, and but a small number of able-bodied seamen remained on board with him. The roadstead being lined with coral, great precautions were necessary to save the cables from being cut, but in spite of them, at new moon, a sudden tempest arose and broke the ship loose. The anchors held well, but the hawsers gave way, and the *Centurion* was carried out to sea. The thunder growled ceaselessly, and the rain fell with such violence that the signals of distress which were given by the crew were not even heard. Anson, most of his officers, and a large part of the crew, numbering one hundred and thirteen persons, remained on land and found themselves deprived of the only means they possessed of leaving Tinian. Their despair was great, their consternation inexpressible. But Anson, with his energy and endless resources, soon roused his companions from their despair! One vessel, that which they had captured from the Spaniards, still remained to them, and it occurred to them to lengthen it, until it could contain them all with the necessary provisions for a voyage to China. However, after nineteen days, the *Centurion* re-

turned, and the English, embarking in her upon the 21st of October, were not long in reaching Macao, putting into a friendly and civilized port for the first time since their departure from England, two years before.

"Macao," says Anson, "formerly rich, well populated, and capable of self-defense against the Chinese Government, is greatly shorn of its ancient splendor! Although still inhabited by the Portuguese and ruled by a Governor, nominated by the King of Portugal, it is at the mercy of the Chinese, who can starve the inhabitants, or take possession of it, for which reasons the Portuguese Governor is very careful not to offend them."

Anson was forced to write an imperious letter to the Chinese Governor, before he could obtain permission to buy, even at high prices, the provisions and stores he required. He then publicly announced his intention of leaving for Batavia and set sail on the 19th of April, 1743. But, instead of steering for the Dutch possessions, he directed his course towards the Philippine Islands, where, for several days, he awaited the arrival of the galleon returning from Acapulco, laden with the proceeds of the sale of her rich cargo. These vessels usually carried forty-four guns, and were manned by a crew of over 500 men. Anson had only 200 sailors, of whom thirty were but lads, but this disproportion did not deter him, for he had the expectation of rich booty, and the cupidity of his men was sufficient guarantee of their courage.

"Why," asked Anson one day of his steward, "why do you no longer give us mutton for dinner? Have we eaten all the sheep we bought in China?"

"Pray excuse me, Commodore," replied the steward, "but I am reserving the only two which remain for the Captain of the galleon."

No one, not even the steward, doubted of success! Anson well understood how to secure it, and the efficiency of his men compensated for their reduced numbers. The struggle was hot, the straw mats which filled the rigging of the galleon took fire and the flames rose as high as the mizzen mast. The Spaniards found the double enemies too much! After a sharp contest of two hours, during which sixty-seven of their men were killed and eighty-four wounded, they surrendered.

It was a rich prize, 1,313,842 "pieces of eight," and 35,682 ounces of ingot silver, with other merchandise of little value in comparison with the money. This booty, added to others, amounted to nearly 400,000*l.* without taking into account the vessels, goods, etc., of the Spaniards which the English squadron had burnt or destroyed, and which could not be reckoned at less than 600,000*l.*

Anson convoyed his prize to the Canton River, where he sold it much below its value, for 6,000 piastres. He left on the 10th of December, and reached Spithead on the 15th of June, 1744, after an absence of three years and nine months. He made a triumphal entry into London. The half-million of money, which was the result of his numerous prizes, was conveyed through the city in thirty-two chariots, to the sound of trumpets and beating of drums and amidst the shouts of the people.

The money was divided between himself, his officers, and men; the king himself could not claim a share. Anson was created rear-admiral shortly after his return, and received important commands.

CHAPTER III

CAPTAIN COOK'S PREDECESSORS

As early as 1669, Roggewein the elder had petitioned the Dutch West India Company for three armed vessels, in order to prosecute his discoveries in the Pacific Ocean. His project was favorably received, but a coolness in the relations between Spain and Holland forced the Batavian government to relinquish the expedition for a time. Upon his death-bed Roggewein forced from his son Jacob a promise to carry the plan he had conceived into execution.

Circumstances, over which he had no control, for a long time hindered the fulfillment of his promise. It was only after several voyages in the Indian seas, after having even been judge in the Batavian Justice Court, that at length Jacob Roggewein was in a position to take the necessary steps with the West India Company. We have no means of finding out Roggewein's age in 1721, or of ascertaining what were his claims to the command of an expedition of discovery. Most biographical dictionaries honor him with

but a slight mention, perhaps of a couple of lines, and Fleurieu, in his learned and exhaustive account of the Dutch navigator, was unable to find out anything certain about him.

Moreover, the narrative of the voyage was written not by Roggewein, but by a German named Behrens. We may, therefore, with some justice, attribute the obscurities and contradictions of the particulars given, and their general want of accuracy, rather to the narrator than to the navigator. It even appears sometimes (and this is far from improbable), that Roggewein was ignorant of the voyages and discoveries of his predecessors and contemporaries.

Upon the 21st of August, 1721, three vessels set sail from Texel, under his command. They were, the *Eagle* of 36 guns, and with a crew of 111 men, the *Tienhoven* of 28 guns and 100 men, Captain James Bauman, and the galley *African* of 14 guns and a crew of 60 men, Captain Henry Rosenthal. Their voyage across the Atlantic afforded no particulars of interest. Touching at Rio, Roggewein went in search of an island which he named Auke's Magdeland, and which would appear to be the same as the Archipelago of the Falkland, unless indeed it was South Georgia. Although these islands were then well known, it would appear that the Dutch knew little of their whereabouts, as after vainly seeking the Falkland Isles, they set to work to look for the island St. Louis, belonging to the French, apparently quite unaware that they belonged to the same group.

After discovering, or rather noticing an island below the parallel of the Straits of Magellan, about twenty-four leagues from the American continent, of two hundred leagues in circumference, which he named South Belgium, Roggewein passed through the Straits of Lemaire, or possibly was carried by the current to 62½° of southern latitude. Finally, he regained the coast of Chili; and cast anchor opposite the island of Mocha, which he found deserted. He afterwards reached Juan Fernandez, where he met with the *Tienhoven,* from which he had been separated since the 21st of December. The vessels left this harbor before the end of March, and steered to the west-north-west, in search of the land discovered by Davis between 27° and 28° south. After a search of several days, Roggewein sighted an island upon the 6th of April, 1722, which he named Easter Island.

A violent storm of wind drove Roggewein from his anchorage on the eastern side of the island, and obliged him to make for the west-north-west. He traversed the sea called Mauvaise by Schouten, and having sailed eight hundred leagues from Easter Island, fell in with what he took to be the Isle of Dogs, so called by Schouten. Roggewein named it Carlshoff, a name which it still retains.

Roggewein continued to sail between the 15th and 16th degrees, and was not long in finding himself "all of a sudden" in the midst of islands which were half submerged.

"As we approached them," says Behrens, "we saw an immense number of canoes navigating the coasts, and we concluded that the islands were well populated. Upon nearing the land we discovered that it consisted of a mass of different islands, situated close the one to the other, and we were insensibly drawn in amongst them. We began to fear that we should be unable to extricate ourselves. The admiral sent one of the pilots up to the look-out to ascertain how we could get free of them."

"We owed our safety to the calm that prevailed. The slightest movement of the water would have run our ships upon the rocks, without the possibility of assistance reaching us. As it was, we got away without any accident worth mentioning. These islands are six in number, all very pleasant, and taken together may extend some thirty leagues. They are situated twenty-five leagues westward of the Pernicious Islands. We named them the Labyrinth, because we could only leave them by a circuitous route."

After navigating for three days in a westerly direction, the Dutch caught sight of a beautiful island. Cocoa-nuts, palm-trees, and luxuriant verdure testified to its fertility. But finding it impossible to anchor there, the officers and crews were obliged to visit it in well-armed detachments.

Here the Dutch needlessly shed the blood of an inoffensive population which had awaited them upon the shore, and whose only fault consisted in their numbers. After this execution, worthy rather of barbarians than of civilized men, they endeavored to persuade the natives to return, by offering presents to the chiefs, and by deceitful protestations of friendship. But they were not to be deceived, and having enticed the sailors into the interior, the inhabitants rushed upon them and attacked them with stones. Although a

volley of bullets stretched a number upon the ground, they still bravely persisted in attacking the strangers, and forced them to re-embark, carrying with them their dead and wounded.

In spite of their losses, the Dutch called this island, in memory of the refreshment they had enjoyed there, Recreation Island. Roggewein gives its situation as below the sixth parallel, but his longitude is so incorrect, that it is impossible to depend upon it.

After having encountered the islands which Roggewein believed to be Cocoa and Traitor Islands, already visited by Schouten and Lemaire, and which Fleurieu, imagining them to be a Dutch discovery, named Roggewein Islands; after having caught sight of Tienhoven and Groningue Islands, which were believed by Pingré to be identical with Santa Cruz of Mendana, the expedition finally reached the coast of New Ireland. Here the discoverers perpetrated new massacres. From thence they went to the shores of New Guinea, and after crossing the Moluccas, cast anchor at Batavia.

There their fellow-countrymen, less humane than many of the tribes they had visited, confiscated the two vessels, imprisoned the officers and sailors indiscriminately, and sent them to Europe to take their trial. They had committed the unpardonable crime of having entered countries belonging to the East India Company, whilst they themselves were in the employ of the West India Company. The result was a trial, and the East India Company was compelled to restore all that it had appropriated, and to pay heavy damages.

The English explorer, Commodore John Byron, born on the 8th of November, 1723, showed an enthusiastic love of seafaring life, and at the age of seventeen offered his services upon one of the vessels that formed Admiral Anson's squadron, when it was sent out for the destruction of Spanish settlements upon the Pacific coast. We have already given an account of the troubles which befell this expedition before the incredible fortune which distinguished its last exploits.

The vessel upon which Byron embarked was the *Wager*. It was wrecked in passing through the Straits of Magellan, and the crew being taken prisoners by the Spaniards, were sent to Chili. After a captivity which lasted at least three

years, Byron effected his escape, and was rescued by a vessel from St. Malo, which took him to Europe. He returned at once to service, and distinguished himself in various encounters during the war with France. Doubtless it was the recollection of his first voyage round the world, so disastrously interrupted, which procured for him the distinction conferred upon him by the British government in 1764. He was appointed to command an expedition for exploring the South Atlantic Ocean.

The vessels entrusted to him were carefully armed. The *Dauphin* was a sixth-rate man-of-war, and carried 24 guns, 150 sailors, 3 lieutenants, and 37 petty officers. The *Tamar* was a sloop of 16 guns, and 90 sailors, 3 lieutenants, 27 petty officers, commanded by Captain Mouat.

The start was not fortunate. The expedition left the Downs upon the 21st of June, but the *Dauphin* grounded before leaving the Thames, and was obliged to put into Plymouth for repairs. Upon the 3d of July, anchor was finally weighed, and ten days later, Byron put in at Funchal in the Island of Madeira for refreshments. He was forced to halt again at Cape Verd Islands, to take in water, that with which he was supplied having become rapidly wasted.

Nothing further occurred to interrupt the voyage, until the two English vessels sighted Cape Frio. The tropical heat, and constant rains, had struck down a large proportion of the crew, hence the urgent need of rest and of fresh victuals which they experienced.

These they hoped to find at Rio de Janeiro, where they arrived on the 12th December. Byron was warmly welcomed by the viceroy, and thus describes his first interview: "When I made my visit, I was received in the greatest state, about sixty officers were drawn up by the palace. The guard was under arms. They were fine, well-drilled men. His Excellency accompanied by the nobility received me on the staircase. Fifteen salutes from the neighboring fort honored my arrival. We then entered the audience-chamber, and after a conversation of a quarter of an hour, I took my leave, and was conducted back with the same ceremonies."

The insupportable heat experienced by the crew shortened their stay at Rio. Upon the 16th of October, anchor was weighed, but it was five days before a land breeze allowed the vessels to gain the open sea.

Until the 29th of October no incident occurred in their passage. Upon that date sudden and violent squalls succeeded each other and culminated in a fearful tempest, the violence of which was so great that the Commodore ordered four guns to be thrown overboard, to avoid foundering. In the morning the weather moderated somewhat, but it was as cold as in England at the same time of year, although in this quarter of the globe the month of November answers to the month of May. As the wind continued to drive the vessel eastward, Byron began to think that he should experience great difficulty in avoiding the coast of Patagonia.

The following days were not much more favorable. After such a troublesome voyage, we may guess how gladly Byron reached Penguin Island and Port Desire on the 24th of November.

The English sailors landed and upon advancing into the interior, met only with a desert country, and sandy hills, without a single tree. They found no game, but they saw a few guanacos too far off for a shot; they were, however, able to catch some large hares, which were not difficult to secure. The seals and sea birds, however, furnished food for an entire fleet.

Badly situated and badly sheltered, Port Desire offered the further inconvenience that only brackish water could be procured there. Not a trace of inhabitants was to be found! A long stay in this place being useless and dangerous, Byron started in search of Pepys Island on the 25th.

The position of this island was most uncertain. Halley placed it 80° east of the continent. Cowley, the only person who asserted that he had seen it declared it was about 47° latitude, S., but did not fix its longitude. Here then was an interesting problem to solve.

After having explored to the N., to the S., and to the E., Byron, satisfied that this island was imaginary, set sail for the Sebaldines, in haste to reach the first possible port where he could obtain food and water, of which he had pressing need. A storm overtook him, during which the waves were so terrific, that Byron declared he had never seen them equaled, even when he doubled Cape Horn with Admiral Anson. This danger surmounted, he recognized Cape Virgin, which forms the northern entrance to the Straits of Magellan.

As soon as his crew were completely recovered from their fatigue and the ships well provisioned, the Commodore, on the 5th of January, 1765, resumed his search for the Falkland Islands. Seven days later, he discovered a land in which he fancied he recognized the Islands of Sebald de Wert, but upon nearing them he found that what he had taken for three islands, was, in reality, but one, which extended far south. He had no remaining doubt that he had found the group marked upon the charts of the time as New Ireland, 51° south latitude, and 63° 32′ west longitude.

First of all, Byron steered clear of them, fearing to be thrown upon a coast with which he was unacquainted, and after this summary bearing, a detachment was selected to skirt the coast as closely as possible, and look for a safe and commodious harbor—which was soon met with. It received the name of Port Egmont, in honor of Earl Egmont, First Lord of the Admiralty.

"I did not expect," says Byron, "that it would be possible to find so good a harbor. The depth was excellent, the supply of water easy; all the ships of England might be anchored there in shelter from winds.

"Geese, ducks, and teal abounded to such an extent, that the sailors were tired of eating them. Want of wood was general, with the exception of some trunks of trees which floated by the shore, and which were apparently brought here from the Strait of Magellan.

"The wild sorrel and celery, both excellent anti-scorbutics, were to be found in abundance. Sea-calves and seals, as well as penguins, were so numerous that it was impossible to walk upon the strand without seeing them rush away in herds. Animals resembling wolves, but more like foxes in shape, with the exception of their height and tails, several times attacked the sailors, who had great difficulty in defending themselves. It would be no easy task to guess how they came here, distant as the country is from any other continent,—by at least a hundred leagues; or to imagine where they found shelter, in a country barren of vegetation, producing only rushes, sword-grasses, and not a single tree."

After having named a number of rocks, islets, and capes, Byron left Port Egmont on the 27th of January, and set sail for Port Desire, which he reached nine days later. There he found the *Florida*—a transport vessel, which had brought

from England the provisions and necessary appliances for his long voyage.

But this anchorage was too dangerous. The *Florida* and the *Tamar* were in too bad a condition to be equal to the long operation of transshipment. Byron therefore sailed through the Strait of Magellan, and landed at Port Famine.

Until the 26th of April, the day upon which they found Mas-a-Fuero, belonging to the Juan Fernandez group, Byron had sailed to the N. W. He hastened to disembark several sailors, who after obtaining water and wood, chased wild goats, which they found better flavored than venison in England.

During their stay in this port, a singular fact occurred. A violent surf broke over the shore, and prevented the shore-boats from reaching the strand. Although he was provided with a life-belt, one of the sailors, who could not swim, refused to jump into the sea to reach the boat. Threatened with being left alone on the island, he still persistently refused to venture, when one of his companions cleverly encircled his waist with a cord, in which he had made a running knot, and one end of which was made fast to the boat. When he reached the vessel, Hawksworth's narrative relates, that the unfortunate fellow had swallowed so much water that he appeared lifeless. He was accordingly hung up by the heels, whereupon he soon regained his senses, and the next day was completely restored. But in spite of this truly wonderful recovery, we can hardly venture to recommend this course of treatment to humane rescue societies.

Leaving here, Byron entered the Pacific, with the intention of seeking Davis Land, now known as Easter Island, which was placed by geographers in 27° 30′, a hundred leagues westward of the American coast. Eight days were devoted to this search. Having found nothing after this cruise, which he was unable to prolong, Byron, following his intention of visiting Solomon group, steered for the northwest. Upon the 22d of May scurvy broke out on board the vessels, and quickly made alarming havoc.

On the 8th of June he found a new land, long, flat, covered with cocoa-nut trees. In its midst was a lake with a little islet. This feature alone was indicative of the madreporic formation of the soil, simple deposit, which was not yet, but which in time would become, an island. The boat sent to

sound met in every direction with a coast as steep as a wall.

Meanwhile the natives made hostile demonstrations. Two men entered the boat. One stole a sailor's waistcoat, another put out his hand for the quartermaster's cocked hat, but not knowing how to deal with it, pulled it towards him, instead of lifting it up, which gave the quartermaster an opportunity of interfering with his intention. Two large pirogues, each manned by thirty paddlers, showed an intention of attacking the vessels, but the latter immediately chased them. Just as they were running ashore a struggle ensued, and the English, all but overwhelmed by numbers, were forced to use their arms. Three or four natives were killed.

Next day, the sailors and such of the sick as could leave their hammocks landed. The natives, intimidated by the lesson they had received in the evening, remained in concealment, whilst the English picked cocoa-nuts, and gathered anti-scorbutic plants. These timely refreshments were so useful that in a few days there was not a sick man on board.

Parrots, rarely beautiful, and tame doves, and several kinds of unknown birds composed the fauna of the island, which received the name of King George—that which was discovered afterwards was called Prince of Wales' Island. All these lands belonged to the Pomotou group, which is also known as the Low Islands, a very suitable name for this archipelago.

On the 21st again a new chain of islands surrounded by breakers was sighted. Byron did not attempt a thorough investigation of these, as to do so he would have incurred risks out of proportion to the benefit to be gained. He called them the Dangerous Islands.

Six days later, Duke of York Island was discovered. The English found no inhabitants, but carried off two hundred cocoa-nuts, which appeared to them of inestimable value.

A little farther, in latitude 1° 18′ south, longitude 173° 46′ west, a desert island received the name of Byron; it was situated eastward of the Gilbert group.

The heat was overwhelming, and the sailors, weakened by their long voyage and want of proper food, in addition to the putrid water they had been forced to drink, were almost all attacked by dysentery.

At length, on the 28th of July, Byron joyfully recognized

Saypan and Tinian Islands, which form part of the Marianne or Ladrone Islands, and he prepared to anchor in the very spot where Lord Anson had cast anchor with the *Centurion*. Tents were immediately prepared for the sufferers from scurvy. Almost all the sailors had been attacked by this terrible disease, many even had been at the point of death. The captain undertook to explore the dense wood which extended to the very edge of the shore, in search of the lovely country so enthusiastically described in the account written by Lord Anson's chaplain. How far were these enchanting descriptions from the truth! Impenetrable forests met him on every side, overgrown plants, briars, and tangled shrubs, at every step caught and tore his clothes. At the same time the explorers were attacked and stung by clouds of mosquitoes. Game was scarce and wild, the water detestable, the roadstead was never more dangerous than at this season.

The halt was made, therefore, under unfortunate auspices. Still, in the end, limes, bitter oranges, cocoa-nuts, bread-fruits, guavas, and others were found. But although these productions were beneficial to the invalids, who were shortly restored to vigor, the malarious atmosphere caused such violent fever that two sailors succumbed to it. In addition, the rain fell unceasingly and the heat was overpowering. Byron says that he never experienced such terrific heat, even in his visits to the coast of Guinea, the East Indies, or St. Thomas Island, which is immediately below the equator.

After a stay of nine weeks, the two ships, amply provisioned, left the port of Tinian. Byron continued his route to the north, passed Poulo Condor at a distance and stopped at Poulo Taya, where he encountered a vessel bearing Dutch colors, but which was manned entirely by Malays. Reaching Sumatra, he explored the coast and cast anchor at Batavia, the principal seat of Dutch power in the East Indies, on the 20th of November.

At this time there were more than one hundred ships, large and small, in this roadstead, so flourishing was the trade of the East India Company at this epoch. The town was at the height of its prosperity. Its large and open thoroughfares, its admirable canals, bordered by pine-trees, its regular buildings, singularly recalled the cities of the Netherlands. Portuguese, Chinese, English, Dutch, Persians, Moors, and

Malays, mixed in the streets, and transacted business. Fêtes, receptions, gaities of every kind impressed new comers with a high idea of the prosperity of the town, and contributed to make their stay a pleasant one. The sole drawback, and it was a serious one to crews after so long a voyage, was the unhealthiness of the locality, where endemic fevers abound. Byron being aware of this, hurried the embarkation of his provisions, and set sail after an interval of twelve days.

Short as their stay had been, it had been too long. The fleet had scarcely reached the strait of the sound, before a malignant fever broke out among the crew, disabling half their number, and ending in the death of three sailors.

After forty-eight days' navigation, Byron perceived the coast of Africa, and cast anchor three days later in Table Bay. Upon the 9th of May, 1766, the *Dauphin* anchored in the Downs, after a voyage round the world which had lasted for twenty-three months.

This was the most fortunate of all the circumnavigation voyages undertaken by the English. Up to this date, no purely scientific voyage had been attempted. If it was less fruitful of results than had been anticipated, the fault lay not so much with the captain as with the Lords of the Admiralty. They were not sufficiently accurate in their instructions, and had not taken the trouble (as was done in later voyages) of sending special professors of the various branches of science with the expedition.

Full justice, however, was paid to Byron. The title of Admiral was conferred on him, and an important command in the East Indies was entrusted to him. But we have no interest in the latter part of his life, which ended in 1786, and to that, therefore, we need not allude.

The impulse once given, England inaugurated the series of scientific expeditions which were to prove so fruitful of results, and to raise her naval reputation to such a height.

Admirable indeed is the training acquired in these voyages round the world. In them the crew, the officers, and sailors, are constantly brought face to face with unforeseen difficulties and dangers, which call forth the best qualities of the sailor, the soldier, and the man! If France succumbed to the naval superiority of Great Britain during the revolutionary and imperial wars, was it not fully as much owing to this stern training of the British seaman, as to the internal dis-

sensions which deprived France of the services of the greater part of her naval staff?

Be this as it may, the English Admiralty, shortly after Byron's return, organized a new expedition. Their preparations appear to have been far too hasty. Captain Samuel Wallis received the command, and hastened the needful preparations on board his ship, the *Dauphin*. On the 21st of August (less than a month after receiving his commission), he joined the sloop *Swallow* and the *Prince Frederick* in Plymouth Harbor.

The latter was in charge of Lieutenant Brine, the former was commanded by Philip Carteret. Both were most distinguished officers who had just returned from the voyage round the world with Commodore Byron, and whose reputation was destined to be increased by their second voyage.

The *Swallow*, unfortunately, appears to have been quite unfit for the service demanded of her. Having already been thirty years in service, her sheathing was very much worn, and her keel was not studded with nails, which might have served instead of sheathing to protect her from parasites. Again the provisions and marketable commodities were so unequally divided, that the *Swallow* received much less than the *Dauphin*. Carteret begged in vain for rope yarn, a forge, and various things which his experience told him would be indispensable. This rebuff confirmed Carteret in his notion that he should not get further than the Falkland Isles, but none the less he took every precaution which his experience dictated to him.

As soon as the equipment was complete, on the 22d of April, 1766, the vessels set sail. It did not take Wallis long to find out that the *Swallow* was a bad sailer, and that he might anticipate much trouble during his voyage. However, no accident happened during the voyage to Madeira, where the vessels put in to revictual. Upon leaving the port, the commander supplied Carteret with a copy of his instructions, and selected Port Famine, in the Strait of Magellan, as a rendezvous, in case of separation.

On the 8th of December, the coast of Patagonia was at last visible. Wallis skirted it until he reached Cape Virgin, where he landed with the armed detachments of the *Swallow* and *Prince Frederick*. A crowd of natives awaited them upon the shore, and received with apparent satisfaction the

knives, scissors, and other trifles which it was usual to distribute upon such occasions, but they would not part with guanacos, ostriches, or any other game which were seen in their possession for any consideration.

On the 17th of December, Wallis signaled the *Swallow* to head the squadron for the passage of the Straits of Magellan.

At Port Famine the commander had two tents erected on shore for the sick, the wood-cutters, and the sailors. Fish in sufficient quantities for each day's meal, abundance of celery, and acid fruits similar to cranberries and barberries, were to be found in this harbor, and in the course of about a fortnight these remedies completely restored the numerous sufferers from scurvy. The vessels were repaired and partially calked, the sails were mended, the rigging, which had been a good deal strained, was overhauled and repaired, and all was soon ready for sea again.

But Wallis first ordered a large quantity of wood to be cut and conveyed on board the *Prince Frederick,* for transport to the Falkland Isles, where it is not obtainable. At the same time he had hundreds of young trees carefully dug up, and the roots covered in their native soil to facilitate their transplantation in Port Egmont, that in taking root—as there was reason to hope they would—they might supply the barren archipelago with this precious commodity.

Lastly, the provisions were divided between the *Dauphin* and the *Swallow.* The former taking sufficient for a year, the latter for ten months.

We will not enlarge upon the different incidents which befell the two ships in the Straits of Magellan, such as sudden gales, tempests and snowstorms, irregular and rapid currents, heavy seas and fogs, which more than once brought the vessels within an inch of destruction. The *Swallow* especially, was in such a dilapidated condition, that Carteret besought Wallis to consider his vessel no longer of any use in the expedition, and to tell him what course should best be pursued for the public good.

Wallis replied, " The orders of the Admiralty are concise, and you must conform to them, and accompany the *Dauphin* as long as possible. I am aware that the *Swallow* is a bad sailer; I will accommodate myself to her speed, and follow her movements, for it is most important that in case of accident to one of the ships, the other should be within reach, to

give all the assistance in her power." Carteret had nothing to urge in reply, but he augured badly for the result of the expedition.

As the ships approached the opening of the straits on the Pacific side, the weather became abominable. A thick fog, falls of snow and rain, currents which sent the vessels on to the breakers, a chopping sea, contributed to detain the navigators in the straits until the 10th of April. On that day, the *Dauphin* and *Swallow* were separated off Cape Pilar, and could not find each other, Wallis not having fixed a rendezvous in case of separation.

Wallis was scarcely free of the strait, when he set sail westward in spite of dense fogs, and with high wind and such a heavy sea, that for weeks together there was not a dry corner in the ship. The constant exposure to damp engendered cold and severe fevers, to which scurvy shortly succeeded. Upon reaching 32° south latitude, and 100° west longitude, the navigator steered due north.

Upon the 6th of June, two islands were discovered amidst general rejoicings. The ships' boats, well armed and equipped, reached the shore under command of Lieutenant Furneaux. A quantity of cocoa-nuts and anti-scorbutic plants were obtained, but although the English found huts and sheds, they did not meet with a single inhabitant. This island was discovered on the eve of Whitsunday and hence received the name Whitsunday. It is situated in 19° 26′ south latitude, and 137° 56′ west longitude. Like the following islands, it belongs to the Pomotou group.

Next day, the English endeavored to make overtures to the inhabitants of another island, but the natives appeared so ill-disposed and the coast was so steep, that it was impossible to land. After tacking about all night, Wallis despatched the boats, with orders not to use violence to the inhabitants if they could avoid it, or unless absolutely obliged.

As Lieutenant Furneaux approached the land, he was astonished by the sight of two large pirogues with double masts, in which the natives were on the eve of embarking. As soon as they had done so, the English landed, and searched the island thoroughly. They discovered several pits full of good water. The soil was firm, sandy, covered with trees, more especially cocoanut-trees, palm-trees, and sprinkled with anti-scorbutic plants. The narrative says:

"The natives of this island were of moderate stature. Their skin was brown, and they had long black hair, straggling over the shoulders. The men were finely formed, and the women were beautiful. Some coarse material formed their garment, which was tied round the waist, and appeared to be intended to be raised round the shoulders. In the afternoon, Wallis sent the lieutenant to procure water and to take possession of the island in the name of King George III. It was called Queen Charlotte's Island, in honor of the English queen."

The *Dauphin* discovered new land, the same day that she left Queen Charlotte's Island. It lay to the westward, but after cruising along the coast, the vessel was unable to find anchorage. Lying low, it was covered with trees, neither cocoa-nuts nor inhabitants were to be found, and it evidently was merely a rendezvous for the hunters and fishers of the neighboring islands. Wallis therefore decided not to stop. It received the name of Egmont, in honor of Earl Egmont, then chief Lord of the Admiralty. The following days brought new discoveries. Gloucester, Cumberland, William, Henry, and Osnaburgh Islands, were sighted in succession. Lieutenant Furneaux was able to procure provisions without landing at the last named.

Observing several large pirogues on the beach, he drew the conclusion that other and perhaps larger islands would be found at no great distance, where they would probably find abundant provisions, and to which access might be less difficult. His prevision was right. As the sun rose upon the 19th, the English sailors were astonished at finding themselves surrounded by pirogues of all sizes, having on board no less than eight hundred natives. After having consulted together at some distance, a few of the natives approached, holding in their hands banana branches. They were on the point of climbing up the vessels, when an absurd accident interrupted these cordial relations.

One of them had climbed into the gangway when a goat ran at him. Turning he perceived the strange animal upon its hind legs preparing to attack him again. Overcome with terror, he jumped back into the sea, an example quickly followed by the others.

Recovering from this alarm, they again climbed into the ship, and brought all their cunning to bear upon petty thefts.

However, only one officer had his hat stolen. The vessel all the time was following the coast in search of a fitting harbor, whilst the boats coasted the shore for soundings.

The English had never found a more picturesque and attractive country in any of their voyages. On the shore, the huts of the natives were sheltered by shady woods, in which flourished graceful clusters of cocoanut-trees. Graduated chains of hills, with wooded summits, and the silver sheen of rivers glistening amid the verdure as they found their way to the sea, added to the beauty of the interior.

The boats sent to take soundings were suddenly surrounded at the entrance of a large bay by a crowd of pirogues. Wallis, to avoid a collision, gave the order for the discharge from the swivel gun above the natives' heads, but although the noise terrified them, they still continued their approach.

The captain accordingly ordered his boats to make for the shore, and the natives finding themselves disregarded, threw some sharp stones which wounded a few sailors. But the captains of the boats replied to this attack by a volley of bullets, which injured one of them, and was followed by the flight of the rest.

The *Dauphin* anchored next day at the mouth of a large river in twenty fathoms of water. Lieutenant Furneaux landed at the head of a strong detachment of sailors and marines, and planting the English flag, took possession of the island in the name of the King of England, in whose honor it was named George the Third. The natives called it Tahiti.

After prostrating themselves, and offering various marks of repentance, the natives appeared anxious to commence friendly and honest business with the English, but fortunately Wallis, who was detained on board by severe illness, perceived preparations for a simultaneous attack by land and sea upon the men sent to find water. The shorter the struggle the less the loss! Acting upon which principle, directly the natives came within gunshot range, a few discharges dispersed their fleet.

It was the 27th of July, when Wallis left George III. Island. After coasting Duke of York Island, he discovered several islands or islets in succession, upon which he did not touch. For example, Charles Saunders, Lord

Howe, Scilly, Boscawen, and Keppel Islands, where the hostile character of the natives, and the difficulty of disembarkation prevented his landing.

Winter was now to begin in the southern region. The vessel leaked in all directions, the stern especially was much strained by the rudder. Was it wise, under such circumstances, to sail for Cape Horn or the Straits of Magellan? Would it not be running the risk of certain shipwreck? Would it not be better to reach Tinian or Batavia, where repairs were possible, and to return to Europe by the Cape of Good Hope?

Wallis decided upon the latter course. He steered for the northwest, and upon the 19th of September, after a voyage which was too fortunate to supply any incidents, he cast anchor in the Tinian harbor.

We have already had occasion to mention the localities which witnessed the completion of the voyage. It is enough to state that from Batavia, where the crews took the fever, Wallis proceeded by the Cape, thence to St. Helena, and finally arrived in the Downs, on the 20th of May, 1768, after six hundred and thirty-seven days' voyage.

We have related how, on the 10th of April, 1767, as the *Dauphin* and the *Swallow* entered the Pacific, the former, carried away by a strong breeze, had lost sight of the latter, and had been unable to follow her. This separation was most unfortunate for Captain Carteret. He knew better than any of his crew the dilapidated condition of his vessel and the insufficiency of his provisions. In short, he was well aware that he could only hope to meet the *Dauphin* in England, as no plan of operation had been arranged, and no rendezvous had been named—a grave omission on Wallis's part, who was aware of the condition of his consort.

Nevertheless, Carteret allowed none of his apprehensions to come to the knowledge of the crew. At first the detestable weather experienced by the *Swallow* upon the Pacific Ocean (most misleading name), allowed no time for reflection. The dangers of the passing moment, in which there was every prospect of their being engulfed, hid from them the perils of the future.

Carteret steered for the north, by the coast of Chili. Upon investigating the quantity of soft water which he had on board, he found it quite insufficient for the voyage he

had undertaken. He determined, therefore, before setting sail for the west, to take in water at Juan Fernandez, or at Mas-a-Fuero.

The weather continued wretched. Upon the evening of the 27th a sudden squall was followed by a rising wind, which carried the vessel straight to the Cape. The violence of the storm failed to carry away the masts or to founder the ship. The tempest continued in all its fury, and the sails being extremely wet, clung round the masts and rigging so closely, that it was impossible to work them. Next day a sudden wave broke the mizzen-mast, just where there was a flaw in the sail, and submerged the vessel for a few moments. The storm only abated sufficiently to allow the crew of the *Swallow* time to recover a little, and to repair the worst damage; then recommenced, and continued with violent squalls until the 7th of May. The wind then became favorable, and three days later Juan Fernandez was reached.

Carteret was not aware that the Spaniards had fortified this island. He was, therefore, extremely surprised at seeing a large number of men upon the shore, and at perceiving a battery of four pieces on the beach, and a fort, pierced with twenty embrasures and surmounted by the Spanish flag, upon a hill.

The rising wind prevented an entrance into Cumberland Bay, and after cruising about for an entire day, Carteret was obliged to content himself with reaching Mas-a-Fuero. But he met the same obstacles, and the surge which broke upon the shore interfered with his operations, and it was only with the utmost difficulty that he succeeded in shipping a few casks of water. Some of the crew, who had been forced by the state of the sea to remain on land, killed guinea fowls enough to feed the entire crew. These, with the exception of some seals and plenty of fish, were the sole result of a stay, marked by a succession of squalls and storms, which constantly placed the ship in danger.

Carteret, who, owing to unfavorable winds, had had several opportunities of noticing Mas-a-Fuero, corrected many of the errors in the account of Lord Anson's voyage, and furnished many details of inestimable use to navigators.

On leaving Mas-a-Fuero, Carteret steered northward in the hope of meeting the southeastern trade wind. Carried

farther than he had counted upon, he determined to seek St. Ambrose, and St. Felix Island, or the island of St. Paul. Now that the Spaniards had taken possession of and fortified Juan Fernandez, those islands might be of great value to the English in the event of war.

In spite of all, the voyage was continued by day and night in a westerly direction until the 2d of July. Upon this day land was discovered to the north, and on the morrow, Carteret was sufficiently close to recognize it. It was only a great rock five miles in circumference, covered with trees, which appeared uninhabited, but the swell, so prevalent at this time of year, prevented the vessel coming alongside. It was named Pitcairn, after the first discoverer. In these latitudes, the sailors, previously in good health, felt the first attacks of scurvy.

Upon the 11th, a new land was seen in 22° southern latitude, and 145° 34′ longitude. It received the name of Osnaburgh in honor of the king's second son.

Next day Carteret sent an expedition to two more islands, where neither eatables nor water was found. The sailors caught many birds in their hands, as they were so tame that they did not fly at the approach of man.

All these islands belonged to the Dangerous group, a long chain of low islands, clusters of which were the despair of all navigators, for the few resources they offered. Carteret thought he recognized Quiros in the land discovered, but this place, which is called by the natives Tahiti, is situated more to the north.

Sickness, however, increased daily. The adverse winds, but especially the damage the ship had sustained, made her progress very slow. Carteret thought it necessary to follow the route upon which he was most likely to obtain provisions and the needful repairs. "My intention in the event of my ship being repaired," says Carteret, "was to continue my voyage to the south upon the return of a favorable season, with a view to new discoveries in that quarter of the world. In fact, I had settled in my own mind, if I could find a continent where sufficient provisions were procurable, to remain near its coast until the sun had passed the Equator, then to gain a distant southern latitude and to proceed westward towards the Cape of Good Hope, and to return eastward after touching at the Falkland Islands,

should it be necessary, and thence to proceed quickly to Europe."

These laudable intentions show Carteret to have been a true explorer, rather stimulated than intimidated by danger, but it proved impossible to carry them into execution.

The trade wind was only met on the 16th, and the weather remained detestable. Above all, although Carteret navigated in the neighborhood of Danger Island, discovered in 1765 by Byron, and by others, he saw no land.

The victuals were now all but consumed or tainted, the rigging and the sails torn by the tempest, half the crew on the sick list, when a fresh alarm for the captain arose. A leak was reported, just below the load water-line; it was impossible to stop it, as long as they were in the open sea. By unexpected good fortune land was seen on the morrow. Needless to say what cries of delight, what acclamations followed this discovery. To use Carteret's own comparison, the feelings of surprise and comfort experienced by the crew can only be likened to those of a criminal, who at the last moment on the scaffold receives a reprieve! It was Nitendit Island, already discovered by Mendana.

To stay the ravages of disease, it was necessary to procure provisions at all costs, and this was utterly impossible in this spot. Carteret weighed anchor on the 17th of August, after calling the island Egmont, in honor of the Lord of the Admiralty, and the bay where he had anchored, Swallow. Although convinced that it was identical with the land named Santa Cruz by the Spaniards, the navigator nevertheless followed the prevailing mania of giving new appellations to all the places he visited. He then coasted the shore for a short distance and ascertained that the population was large. He had much trouble with the natives and several of his men were killed. These obstacles, and moreover the impossibility of procuring provisions, prevented Carteret's reconnoitering the other islands of this group, upon which he bestowed the name of Queen Charlotte.

"The inhabitants of Egmont Isle," he says, "are extremely agile, active, and vigorous. They appear to live as well in water as on land, for they are continually jumping from their pirogues into the sea. One of the arrows which they sent passed through the planks of the boat, and

dangerously wounded the officer at the poop in the thigh.

"Their arrows are tipped with stone, and we saw no metal of any kind in their possession. The country in general is covered with woods and mountains and interspersed with a great number of valleys."

On the 18th of August, 1767, Carteret left this group with the intention of regaining Great Britain. He fully expected to meet with an island on his passage, where he might be more fortunate. And on the 20th, he actually did so, discovering a little low island, which he named Gower, where cocoa-nuts were procurable. Next day he encountered Simpson and Carteret Islands, and a group of new islands which he took to be the Ohang Java, discovered by Tasman; then successively Sir Charles Hardy and Winchelsea Islands, which he did not consider as belonging to the Solomon Archipelago, the Island of St. John, so called by Schouten, and finally that of New Britain, which he gained on the 28th of August.

Although all this portion of the narrative of his voyage, in countries unknown before his time, abounds in precious details, Carteret, a far more able and zealous navigator than his predecessors Byron and Wallis, makes excuses for not having collected more facts.

"The description of the country," he says, "and of its productions and inhabitants, would have been far more complete and detailed had I not been so weakened and overcome by the illness to which I had succumbed through the duties which developed upon me from want of officers. When I could scarcely drag myself along, I was obliged to take watch after watch and to share in other labors with my lieutenant, who was also in a bad state of health."

After leaving St. George's Strait, the route was westward. Carteret discovered several other islands, but illness for several days prevented his coming on deck, and therefore he could not determine their position. He named them Admiralty Islands, and after two attacks, found himself forced to employ fire-arms to repulse the natives.

He afterwards reconnoitered Durour and Matty Islands and the Cuedes, whose inhabitants were quite delighted at receiving bits of an iron hoop. Carteret affirms, that he might have bought all the productions of this country for a few iron instruments. Although they are the neighbors of

New Guinea, and of the groups they had just explored, these natives were not black, but copper colored. They had very long black hair, regular features, and brilliantly white teeth. Of medium height, strong and active, they were cheerful and friendly, and came on board fearlessly. One of them even asked permission to accompany Carteret upon his voyage, and in spite of all the representations of his countrymen and even of the captain, he refused to leave the *Swallow*. Carteret, meeting with so decided a will, consented, but the poor Indian, who had received the name of Joseph Freewill, soon faded away and died at Celebes.

The vessel then proceeded with so much difficulty that she only accomplished twenty-eight leagues in fifteen days. "Ill," says Carteret, "weakened, dying, tortured by the sight of lands which we could not reach, exposed to tempests which we found it impossible to overcome, we were attacked by a pirate!"

The latter, hoping to find the English crew asleep, attacked the *Swallow* in the middle of the night. But far from allowing themselves to be cowed by this new danger, the sailors defended themselves with so much courage and skill, that they succeeded in foundering the Malay prah.

On the 12th of December Carteret sorrowfully perceived that the western monsoon had commenced. The *Swallow* was in no condition to struggle against this wind and current to reach Batavia by the west. He must then content himself with gaining Macassar, then the principal colony of the Dutch in the Celebes Islands. When the English arrived, it was thirty-five weeks since they left the Straits of Magellan.

Anchor was scarcely cast, when a Dutchman, sent by the governor, came on board the *Swallow*. He appeared much alarmed on finding that the vessel belonged to the English marine service. In the morning, therefore, when Carteret sent his lieutenant, Mr. Gower, to ask for access to the port in order to secure provisions for his dying crew, and to repair his dilapidated ship, and await the return of the monsoon, not only could he not obtain permission to land, but the Dutch hastened to collect their forces and arm their vessels. Finally, after five hours, the governor's reply was brought on board. It was a refusal couched in

terms as little polite as they were equivocal. The English were simultaneously forbidden to land at any port under Dutch government.

All Carteret's representations, his remarks upon the inhumanity of the refusal, even his hostile demonstrations, had no other result than the sale of a few provisions, and permission to proceed to a small neighboring bay.

On the 15th of September, the *Swallow,* partially refitted, set sail. She was reinforced with a supplementary number of English sailors, without which it would have been impossible to regain Europe. Eighty of her original crew were dead, and eighty more were so reduced that seven of their number died before they reached the Cape.

After a stay in this port, a most salutary one for the crew, which lasted until the 6th of January, 1769, Carteret set out once more, and a little beyond Ascension Island, at which he had touched, he met a French vessel. It was the frigate, *La Boudeuse,* with which Bougainville had just been round the world.

On the 20th of March the *Swallow* anchored in Spithead roadstead, after thirty-one months of a voyage as painful as it had been dangerous. All Carteret's nautical ability, all his *sang froid,* all his enthusiasm were needed to save so inefficient a vessel from destruction, and to make important discoveries, under such conditions. If the perils of the voyage add luster to his renown, the shame of such a miserable equipment falls upon the English Admiralty, who, despising the representations of an able captain, risked his life and the lives of his crew upon so long a voyage.

CHAPTER IV

BOUGAINVILLE AND COOK

WHILST Wallis completed his voyage round the world, and Carteret continued his long and hazardous circumnavigation, a French expedition was organized for the purpose of prosecuting new discoveries in the Southern Seas.

Under the old régime, when all was arbitrary, titles, rank, and places were obtained by interest. It was therefore not surprising that a military officer, who left the army scarcely four years before with the rank of colonel, to enter the

navy as a captain, should obtain this important command.

Strangely enough, this singular measure was amply justified, thanks to the talents possessed by the favored recipient.

Louis Antoine de Bougainville was born at Paris, on the 13th of November, 1729. The son of a notary, he was destined for the bar, and was already an advocate. But having no taste for his father's profession, he devoted himself to the sciences, and published a Treatise on the Integral Calculus, whilst he obtained a commission in the Black Musqueteers.

Of the three careers he thus entered upon, he entirely abandoned the two first, slightly neglected the third, for the sake of a fourth—diplomacy, and finally left it entirely for a fifth—the naval service. He was destined to die a member of the senate after a sixth metamorphosis.

His military career was cut short by the peace of 1763. His active spirit and love of movement rebelled against a garrison life. He conceived the strange idea of colonizing the Falkland Islands in the extreme south of South America, and of conveying there free of expense the emigrants from Canada who had settled in France to escape the tyrannous yoke of England. Carried away by this idea, he addressed himself to certain privateers at St. Malo, who, from the commencement of the century, had been in the habit of visiting the group, and who had named them Malouine Islands.

Having gained their confidence, Bougainville brought the advantages (however problematical) of this colony to the minister's notice, maintaining that the fortunate situation of the island would secure a good resting-place for ships going to the Southern Seas. Having high interest, he obtained the authority he desired, and received his nomination as ship-captain.

The colony was beginning to make a show, when the English settled themselves in Port Egmont, reconnoitered by Byron. At the same time Captain Macbride attempted to obtain possession of the colony, on the ground that the land belonged to the English king, although Byron had not recognized the Malouines in 1765, and the French had then been settled there two years.

In the meantime Spain laid claim to it in her turn, as a dependency of Southern America. England and France

were equally adverse to a breach of the peace, for the sake of this archipelago, which was of so little commercial value, and Bougainville was forced to relinquish his undertaking on condition that the Spanish Government indemnified him for his expenses. In addition, he was ordered by the French Government to facilitate the restoration of the Malouines to the Spanish Commissioners.

This foolish attempt at colonization was the origin and ground-work of Bougainville's good fortune, for in order to make use of the last equipment, the minister ordered Bougainville to return by the South Sea, and to make discoveries.

In the early days of November, 1766, Bougainville repaired to Nantes, where his second in command, M. Duclos-Guiyot, captain of the fire-ship, and an able and veteran sailor, who grew gray in the inferior rank because he was not noble, superintended the equipment of the frigate *La Boudeuse,* of twenty-six guns.

Bougainville left the roadstead of Minden at the mouth of the Loire, on the 15th of November, for the La Plata river, where he hoped to find two Spanish vessels, the *Esmeralda* and the *Liebre.* But scarcely had the *Boudeuse* gained the open sea when a furious tempest arose. The frigate, the rigging of which was new, sustained such serious damages that it was necessary to put for repairs into Brest, which she entered on the 21st November. This experience sufficed to convince the captain that the *Boudeuse* was but little fitted for the voyage he had before him. He therefore had the masts shortened, and changed his artillery for less heavy pieces, but in spite of these modifications, the *Boudeuse* was not fit for the heavy seas and storms of Cape Horn. However, the rendezvous with the Spaniards was arranged, and Bougainville was obliged to put to sea.

As far as La Plata the sea was calm enough to allow of Bougainville's making many observations on the currents, a frequent source of the errors made by navigators in their reckonings. On the 31st of January, *La Boudeuse* anchored in Montevideo Bay, where the two Spanish frigates had been awaiting her for a month.

Upon the 1st of April the restitution of the colony to the Spaniards was solemnized. Very few French profited by their king's permission to remain in the Malouines; almost

all preferred to embark upon the Spanish frigates upon their leaving Montevideo. As for Bougainville, he was forced to await the provisions, which the fly-boat *Etoile* was to bring him, and which was to accompany him upon his voyage round the world.

Toward the end of November both ships came in sight of Virgin Cape at the entrance to the Strait of Magellan, which they hastened to enter. Possession Bay, the first they met with, is a large space, open to all winds and offering very bad anchorage. From Virgin Cape to Orange Cape is about fifteen leagues, and the strait is throughout seven or eight leagues wide. The first narrow entrance was easily passed, and anchor cast in Boucault Bay, where half a score of officers and men landed. They soon made acquaintance with the Patagonians, and exchanged a few trifles, precious to the natives, for swansdown and guanaco skins.

The French reconnoitered several bays, capes, and harbors at which they touched. They were Bougainville Bay, where the *Etoile* was repainted, Port Beau Bassin, Cormadière Bay, off the coast of Terra del Fuego, and Cape Forward, which forms the most southerly point of the strait and of Patagonia, Cascade Bay in Terra del Fuego, the safety, easy anchorage, and facilities for procuring water and wood of which, render it a most desirable haven for navigators.

Scarcely had he entered the Pacific when Bougainville, to his intense surprise, found the winds southerly. He was therefore obliged to relinquish his intention of reaching Juan Fernandez.

Bougainville had agreed with M. de la Giraudais, captain of the *Etoile,* that if a larger stretch of sea was discovered, the two vessels should separate, but not lose sight of each other, and that every evening the bugle should recall them within half a league of each other, so that, in the event of the *Boudeuse* encountering danger, the *Etoile* might avoid it. Bougainville for some time sought Easter Island in vain. At last he fell in during the month of March with the lands and islands erroneously marked upon M. Bellin's chart as Quiros Islands. On the 22nd of the same month he met with four islets, to which he gave the name of Quatre Facardins, which belonged to the Dangerous group,

a set of madreporic islets, low and damp, which all navigators who have visited the Pacific Ocean by way of the Straits of Magellan appear to have noticed.

A little further, discovery was made of a fertile island inhabited by entirely naked savages, who were armed with long spears, which they brandished with menacing gestures, and thus it obtained the name of Lancers Island.

We need not refer to what we have already repeatedly said of the nature of these islands, the difficulty of access to them, their wild and inhospitable inhabitants. Cook calls this very Lancers Island, Thrum Cape, and the island of La Harpe, which Bougainville found on the 24th, is identical with Cook's Bow Island.

The captain, knowing that Roggewein had nearly perished in these latitudes, and thinking the interest of their exploration not worth the risk to be run, proceeded southward and soon lost sight of this immense archipelago, which extends in length 500 leagues, and contains at least sixty islands or groups.

Upon the 2nd of April Bougainville perceived a high and steep mountain, to which he gave the name of La Boudeuse. It was Maïtea Island, already called La Dezana by Quiros. On the 4th at sunrise the vessel reached Tahiti, a long island consisting of two peninsulas, united by a tongue of land no more than a mile in width. It was here that Wallis had encamped.

More than 100 pirogues hastened to surround the two vessels. They were laden with cocoa-nuts and many delicious fruits which were readily exchanged for all sorts of trifles.

When night fell, the shore was illuminated by a thousand fires, to which the crew responded by throwing rockets.

"The appearance of this shore," says Bougainville, "raised like an amphitheatre, offered a most attractive picture. Although the mountains are high, the land nowhere shows its nakedness, being covered with wood. We could scarcely credit our sight, when we perceived a peak, covered with trees, which rose above the level of the mountains in the southern portion of the island. It appeared only thirty fathoms in diameter, and decreased in size at its summit. At a distance it might have been taken for an immense pyramid, adorned with foliage by a clever decora-

tor. The least elevated portions of the country are intersected by fields and groves. And the entire length of the coast, upon the shore below the higher level, is a stretch of low land, unbroken and covered by plantations. There, amid the bananas, cocoa-nut and other fruit-trees we saw the huts of the natives."

Upon the morning of the 6th, after three days devoted to tacking about and reconnoitering the coast in search of a roadstead, Bougainville decided to cast anchor in the bay he had seen the first day of his arrival.

"The number of pirogues round our vessel," he says, "was so great, that we had immense trouble in making way through the crowd and noise. All approached crying 'Tayo,' *friend,* and offering a thousand marks of friendship. The pirogues were full of women, who might vie with most Europeans in pleasant features, and who certainly excelled them in beauty of form."

Bougainville's cook managed to escape, in spite of all prohibitions, and gained the shore. But he had no sooner landed, than he was surrounded by a vast crowd, who entirely undressed him to investigate his body. Not knowing what they were going to do with him, he thought himself lost, when the natives restored his clothes, and conducted him to the vessel more dead than alive. Bougainville wished to reprimand him, but the poor fellow assured him, that however he might threaten him, he could never equal the terrors of his visit on shore.

As soon as the ship could heave to, Bougainville landed with some of his officers to reconnoiter the watering-place. An enormous crowd immediately surrounded him, and examined him with great curiosity, all the time crying "Tayo! Tayo!" One of the natives received them in his house, and served them with fruits, grilled fish, and water. As they regained the shore, a native of fine appearance, lying under a tree, offered them a share of the shade.

"We accepted it," says Bougainville, "and the man at once bent towards us, and in a gentle way, sung, to the sound of a flute which another Indian blew with his nose, a song which was no doubt anacreontic. It was a charming scene, worthy of the pencil of Boucher. Four natives came with great confidence to sup and sleep on board. We had the flute, bassoon, and violin played for them, and treated them

to fireworks composed of rockets and serpents. This display excited both surprise and fear."

Before giving further extracts from Bougainville's narrative it appears *apropos* to warn the reader not to accept these descriptions *au pied de la lettre*. The fertile imagination of the narrator embellished everything. Not content with the ravishing scenes under his eyes, the picturesque reality is not enough for him, and he adds new delights to the picture, which only overload it. He does this almost unconsciously. None the less, his descriptions should be received with great caution.

At eight o'clock on the 16th of April, Bougainville was about ten leagues north of Tahiti, when he perceived land to windward. Although it had the appearance of three islands, it was in reality but one. It was named Oumaita after Aotourou. The captain, not thinking it wise to stop there, steered so as to avoid the Pernicious Islands, of which Roggewein's disaster had made him afraid. During the remainder of the month of April the weather was fine, with little wind.

On the 3rd of May, Bougainville bore down towards a new land, which he had just discovered, and was not long in finding others on the same day. The coasts of the largest one were steep; in point of fact, it was simply a mountain covered with trees to its summit, with neither valley nor sea coast. Some fires were seen there, cabins built under the shade of the cocoanut-trees, and some thirty men running on the shore. In the evening, several pirogues approached the vessels, and after a little natural hesitation, exchanges commenced. The natives demanded pieces of red cloth in exchange for cocoa-nuts, yams, and far less beautiful stuffs than those of the Tahitans! they disdainfully refused iron, nails, and earrings, which had been so appreciated elsewhere in the Bourbon Archipelago, as Bougainville had named the Tahitan group. The natives had their breasts and thighs painted dark blue; they wore no beards; their hair was drawn into tufts on the top of their heads.

Next day, fresh islands belonging to the archipelago were seen. The natives, who appeared very savage, would not approach the vessels.

As fresh victuals diminished, scurvy again began to ap-

pear. It was necessary to think of putting into a port again. On the 22nd and the following days of the same month, Pentecost Island, Aurora and Leper Islands, which belong to the archipelago of New Hebrides, were reconnoitered. They had been discovered by Quiros in 1606. The landing appearing easy, the captain determined to send an expedition on shore, which would bring back cocoanuts and other anti-scorbutic fruits. Bougainville joined them during the day. The sailors cut wood, and the natives aided in shipping it. But in spite of this apparent good feeling, the natives were still distrustful, and carried their weapons in their hands. Those who possessed none, held large stones, all ready to throw.

As soon as the boats were laden with fruit and wood, Bougainville re-embarked his men. The natives then approached in great numbers, and discharged a shower of arrows, lances, and javelins, some even entered the water, the better to aim at the French. Several gunshots, fired into the air, having no effect, a well-directed general volley soon put the natives to flight.

A few days later, a boat seeking anchorage upon the coast of the Leper Islands, was in danger of attack. Two arrows aimed at them served as a pretext for the first discharge, which was speedily followed by a fire so well directed, that Bougainville believed his crew in danger. The number of victims was very large; the natives uttered piercing cries as they fled to the woods. It was a regular massacre. The captain, uneasy at the prolonged firing, sent another boat to the help of the first, when he saw it doubling a point. He therefore signaled for their return. "I took measures," he said, "that we should never again be dishonored by such an abuse of our superior forces."

The easy abuse of their powers by captains is truly sad! The mania for destroying life needlessly, even without any object, raises one's indignation! To whatever nation explorers belong we find them guilty of the same acts. The reproach, therefore, belongs not to a particular nation, but to humanity at large. Having obtained the commodities he needed, Bougainville regained the sea.

It would appear that the navigator aimed at making many discoveries, for he only reconnoitered the lands he found very superficially and hastily, and of all the charts which ac-

company the narrative, and there are many of them, not one gives an entire archipelago, or settles the various questions to which a new discovery gives rise. Captain Cook did not proceed in this way. His explorations, always conducted with care, and with rare perseverance, are for that very reason far superior in value to those of the French explorer.

The lands which the French now encountered, were no other than St. Esprit, Mallicolo, and St. Bartholomew, and the islets belonging to the latter. Although he was perfectly aware that these islands were identical with the *Tierra del Espiritu Santo* of Quiros, Bougainville could not refrain from bestowing a new name upon them, and called them the Archipelago des "Grandes Cyclades," to which, however, the name of New Hebrides has been given in preference.

Whilst Bougainville was in these latitudes certain business matters required his presence on board the *Etoile,* and he there found out a singular fact, which had already been largely discussed by his crew. M. de Commerson had a servant named Barré. Indefatigable, intelligent, and already an experienced botanist, Barré had been seen taking an active part in the herborising excursions, carrying boxes, provisions, the weapons, and books of plants, with endurance which obtained from the botanist, the nickname of his beast of burden. For some time past Barré had been supposed to be a woman. His smooth face, the tone of his voice, his reserve, and certain other signs, appeared to justify the supposition, when on arriving at Tahiti suspicions were changed into certainty. M. de Commerson landed to botanize, and according to custom Barré followed him with the boxes, when he was surrounded by natives, who, exclaiming that it was a woman, were disposed to verify their opinion. A midshipman, M. Bommand, had the greatest trouble in rescuing her from the natives, and escorting her back to the ship. When Bougainville visited the *Etoile,* he received Barré's confession. In tears, the assistant botanist confessed her sex, and excused herself for having deceived her master, by presenting herself in man's clothes, at the very moment of embarkation. Having no family, and having been ruined by a law-suit, this girl had donned man's clothes to insure respect. She was aware, before

she embarked, that she was going on a voyage round the world, and the prospect, far from frightening her, only confirmed her in her resolution.

"She will be the first woman who has been round the world," says Bougainville, "and I must do her the justice to admit that she has conducted herself with the most scrupulous discretion. She is neither ugly nor pretty, and at most is only twenty-six or twenty-seven years old. It must be admitted that had the two vessels suffered shipwreck upon a desert island, it would have been a singular experience for Barré."

The expedition lost sight of land on the 29th of May. The route was directed westward. On the 4th of June, a very dangerous rock, so slightly above water that at two leagues' distant it was not visible from the look-out, was discovered in latitude 15° 50′, and 148° 10′ longitude. The constant recurrence of breakers, trunks of trees in large quantities, fruits and sea wrack, and the smoothness of the sea, all indicated the neighborhood of extensive land to the southeast. It was New Holland. Bougainville determined to leave these dangerous latitudes, where he was likely to meet with nothing but barren lands, and a sea strewn with rocks and full of shallows. There were other urgent reasons for changing the route, provisions were getting low, the salt meat was so tainted that the rats caught on board were eaten in preference. Bread enough for two months, and vegetables for forty days alone remained. All clamored for a return to the north.

From thence Bougainville penetrated to the Molucca Archipelago, where he reckoned upon finding the fresh provisions requisite for the forty-five sufferers from scurvy on board.

In absolute ignorance of the events which had occurred in Europe since he left it, Bougainville would not run the risk of visiting a colony in which he was not the strongest power. The small Dutch establishment, Boeton or Bourou Island, suited him perfectly, all the more that provisions were easily obtained there. The crew received orders to enter the Gulf of Cajeti with the greatest delight. No one on board had escaped scurvy, and half the crew, Bougainville says, were quite unfit for duty.

"The victuals remaining to us were so tainted and ill-

smelling, that the worst moments of our sad days were those when we were obliged to partake of such disgusting and unwholesome viands."

Scarcely had the *Boudeuse* and the *Etoile* cast anchor, than the resident governor sent two soldiers to inquire of the French captain what reason he could assign for stopping at this place, when he must be aware that entrance was permitted to the ships of the India Company only. Bougainville immediately sent an officer to explain that hunger and sickness forced him to enter the first port which presented itself in his route. Also, that he would leave Boeton as soon as he had received the aid of which he had urgent need. The resident at once sent him the order of the Governor of Amboyna, which expressly forbade his receiving any strange ship in his harbor, and begged Bougainville to make a written declaration of the reason for his putting into port, in order that he might prove to his superior that he had not infringed his orders except under paramount necessity.

As soon as Bougainville had signed a certificate to this effect, cordiality was established with the Dutch. The resident entertained the officers at his own table, and a contract was concluded for provisions and fresh meat. Bread gave place to rice, the usual food of the Dutch, and fresh vegetables, which are not usually cultivated in the island, were provided for the crews by the resident, who obtained them from the Company's gardens. It would have been desirable for the re-establishment of the health of the crew, that the stay at this port could have been prolonged, but the end of the monsoon warned Bougainville to set out for Batavia.

The captain left Boeton on the 7th of September, convinced that navigation in the Molucca Archipelago was not so difficult as it suited the Dutch to affirm. As for trusting to French charts, they were of no use, being more qualified to mislead vessels than to guide them.

Bougainville therefore directed his course through the Straits of Button and Saleyer; a route which, though commonly used by the Dutch, is but little known to other nations. The narrative therefore carefully describes, with mention of every cape, the course he took. We will not dwell upon this part of the voyage, although it is very instructive, and on that account interesting to seafaring men.

On the 28th of September, ten months and a half after leaving Montevideo, the *Etiole* and the *Boudeuse* arrived at Batavia, one of the finest colonies in the world. After touching at the Isle of France, the Cape of Good Hope, and Ascension Island, near which he met Carteret, Bougainville entered St. Malo on the 16th of February, 1769, having lost only seven men, in the two years and four months which had elapsed since he left Nantes.

Following Bougainville's circumnavigation came Captain Cook's three remarkable voyages, which should be read in the original account. The excellent journals kept by this great explorer cleared away the mystery of the Pacific, supplying the world with full knowledge of those countless islands.

CHAPTER V

AFRICAN EXPLORERS

AN Englishman named Thomas Shaw, a chaplain in Algeria, had profited by his twelve years' stay in Barbary to gather together a rich collection of natural curiosities, medals, inscriptions, and various objects of interest. Although he himself never visited the southern portion of Algeria, he availed himself of the facts he was able to obtain from well-informed travelers, who imparted to him a mass of information concerning the little known and scarcely visited country. He published a book in two large quarto volumes, which embraced the whole of ancient Numidia.

It was rather the work of a learned man than the account of a traveler, and it must be admitted that the learning is occasionally ill-directed. But in spite of its shortcomings as a geographical history, it had a large value at the time of its publication, and no one could have been better situated than Shaw for collecting such an enormous mass of material.

The following extract may give an idea of the style of the work:

"The chief manufacture of the Kabyles and Arabs is the making 'hykes,' as they call their blankets. The women alone are employed in this work; like Andromache and Penelope of old, they do not use the shuttle, but weave

every thread of the woof with their fingers. The usual size of a hyke is six yards long and five or six feet broad, serving the Kabyle and Arab as a complete dress during the day, and as a covering for the bed at night. It is a loose but troublesome garment, as it is often disarranged and slips down, so that the person who wears it is every moment obliged to tuck it up and rearrange it. This shows the great use there is of a girdle whenever men are in active employment, and explains the force of the Scripture injunction *of having our loins girded.* The method of wearing this garment, with the use it is at other times put to as bed covering, makes it probable that it is similar to if not identical with the *peplus* of the ancients. It is likewise probable that the loose garment flung over the shoulder, the *toga* of the Romans, was of this kind, as the drapery of statues is arranged very much in the same manner as the Arab hyke."

It is unnecessary to linger over this work, which has little interest for us. We shall do better to turn our attention to the journey of Frederic Conrad Horneman to Fezzan.

This young German offered his services to the African Society of London, and, having satisfied the authorities of his knowledge of medicine and acquaintance with the Arabic language, he was engaged, and furnished with letters of introduction, safe-conducts, and unlimited credit.

Leaving London in July, 1797, he went first to Paris. Lalande introduced him to the Institute, and presented him with his "Mémoire sur l'Afrique," and Broussonet gave him an introduction to a Turk from whom he obtained letters of recommendation to certain Cairo merchants who carried on business in the interior of Africa.

During his stay at Cairo, Horneman devoted himself to perfecting his knowledge of Arabic, and studying the manners and customs of the natives. We must not omit to mention that the traveler had been presented by Monge and Berthollet to Napoleon Bonaparte, who was then in command of the French forces in Egypt. From him he received a cordial welcome, and Bonaparte placed all the resources of the country at his service.

As the safer method of traveling, Horneman resolved to disguise himself as a Mohammedan merchant. He quickly learned a few prayers, and adopted a style of dress likely

to impose upon unsuspecting people. He then started, accompanied by a fellow-countryman named Joseph Frendenburg, who had been a Mussulman for more than twelve years, had already made three pilgrimages to Mecca, and was perfectly familiar with the various Turkish and Arabic dialects. He was to act as Horneman's interpreter.

On the 5th of September, 1798, the traveler left Cairo with a caravan, and visited the famous oasis of Jupiter Ammon or Siwah, situated in the desert on the east of Egypt. It is a small independent state, which acknowledges the Sultan, but is exempt from paying tribute. The town of Siwah is surrounded by several villages, at distances of a mile or two. It is built upon a rock in which the inhabitants have hollowed recesses for their dwellings. The streets are so narrow and intricate that a stranger cannot possibly find his way among them.

This oasis is of considerable extent. The most fertile portion comprises a well-watered valley, about fifty miles in circumference, which is productive of corn and edible vegetables. Dates of an excellent flavor are its most valuable export.

Horneman was anxious to explore some ruins which he had noticed, for he could obtain little information from the natives. But every time he penetrated to any distance in the ruins, he was followed by a number of the inhabitants, who prevented him from examining anything in detail. One of the Arabs said to him, "You must still be a Christian at heart, or you would not so often visit the works of the infidels."

This remark put a speedy end to Horneman's further explorations. As far as his superficial examination enabled him to judge, it was really the oasis of Ammon, and the ruins appeared to him to be of Egyptian origin.

The immense number of catacombs in the neighborhood of the town, especially on the hill overlooking it, indicate a dense population in ancient times. The traveler endeavored vainly to obtain a perfect head from one of these burial places. Amongst the skulls he procured, he found no certain proof that they had been filled with resin. He met with many fragments of clothing, but they were all in such a state of decay that it was impossible to decide upon their origin or use.

After a stay of eight days in this place, Horneman crossed the mountains which surrounded the oasis of Siwah, and directed his steps towards Schiatah. So far no misfortune had interrupted his progress. But at Schiatah he was denounced as a Christian and a spy. Horneman cleverly saved his life by boldly reading out a passage in the Koran which he had in his possession. Unfortunately, his interpreter, expecting that his baggage would be searched, had burned the collection of fragments of mummies, the botanical specimens, the journal containing the account of the journey, and all the books. This loss was quite irreparable.

A little further on, the caravan reached Augila, a town mentioned by Herodotus, who places it some ten days' journey from the oasis of Ammon. This accords with the testimony given by Horneman, who reached it in nine days' forced march. At Augila a number of merchants from Bengasi, Merote, and Mokamba had joined the caravan, amounting altogether to no less than a hundred and twenty persons. After a long journey over a sandy desert, the caravan entered a country interspersed with hills and ravines, where they found trees and grass at intervals. This was the desert of Harutsch. It was necessary to cross it in order to reach Temissa, a town of little note, built upon a hill, and surrounded by a high wall. At Zuila the Fezzan country was entered. The usual ceremonies, with interminable compliments and congratulations, were repeated at the entrance to every town. The Arabs appear to lay great stress upon these salutations, little trustworthy as they are, and travelers constantly express surprise at their frequent recurrence.

Upon the 17th of November, the caravan halted at Murzuk, the capital of Fezzan. It was the end of the journey. Horneman says that the greatest length of the cultivated portion of Fezzan is about three hundred miles from north to south, but to this must be added the mountainous region of Harutsch on the east, and the various deserts north and west. The climate is never pleasant; in summer the heat is terrible, and when the wind blows from the south, it is all but insupportable, even to the natives, and in winter the north wind is so cold that they are obliged to have recourse to fires.

The produce of the country consists principally of dates

and vegetables. Murzuk is the chief market; there are collected the products of Cairo, Bengazi, Tripoli, Ghâdames, Ghât, and the Soudan. Among the articles of commerce are male and female slaves, ostrich feathers, skins of wild beasts, and gold dust or nuggets. Bornu produces copper, Cairo silks, calicoes, woolen garments, imitation coral, bracelets, and Indian manufactures. Firearms, sabers, and knives are imported by the merchants of Tripoli and Ghâdames.

The Fezzan country is ruled by a sultan desecended from the scherifs, whose power is limitless, but who, nevertheless, pays a tribute of four thousand dollars to the Bey of Tripoli. Horneman, without giving the grounds of his calculation, informs us that the population amounts to seventy-five thousand inhabitants, all of whom profess Mohammedanism.

Horneman's narrative gives a few more details of the manners and customs of the people. He ends his report to the African Society by saying that he proposes visiting Fezzan again in the hope of obtaining new facts.

We learn, further, that Frendenburg, Horneman's faithful associate, died at Murzuk. Attacked by a violent fever, Horneman was forced to remain much longer than he desired in that town. While still only partially recovered, he went to Tripoli for change and rest, hoping there to meet with Europeans. Upon the 1st of December, 1799, he returned to Murzuk, and left it finally with a caravan upon the 7th of April, 1800. He was irresistibly attracted towards Bornu, and perished in that country, which was to claim so many victims.

During the eighteenth century, Africa was literally besieged by travelers. Explorers endeavored to penetrate into it from every side. More than one succeeded in reaching the interior, only to meet with repulse or death. The discovery of the secrets of this mysterious continent was reserved for our own age, when the unexpected fertility of its resources has astonished the civilized world.

The facts relating to the coast of Senegal needed confirmation, but the French superiority was no longer undisputed. The English, with their earnest and enterprising character, were convinced of its importance in the development of their commerce, and determined upon its explora-

tion. But before proceeding to the narrative of the adventures of Major Houghton and Mungo Park, we will devote a small space to the record of the work done by the French naturalist, Michael Adanson.

Devoted from early youth to the study of natural history, Adanson wished to become famous by the discovery of new species. It was hopeless to dream of obtaining them in Europe, and, in spite of opposition, Adanson selected Senegal as the field of his labors. He says, in a manuscript letter, that he chose it because it was the most difficult to explore of all European settlements, and, being the hottest, most unhealthy, and most dangerous, was the least known by naturalists. Certainly a choice founded upon such reasoning gave proof of rare courage and ambition.

It is true that Adanson was by no means the first naturalist to encounter similar dangers, but he was the first to undertake them, with so much enthusiasm, at his own cost, and without hope of reward. Upon his return, he had not sufficient money to pay for the publication of his account of the discoveries he had made.

Embarking upon the 3rd of March, 1749, on board the *Chevalier Marin*, commanded by D'Après de Mannevillette, he touched at Santa Cruz, Teneriffe, and disembarked at the mouth of the Senegal, which he took to be the Niger of ancient geographers. During nearly five years he was engaged in exploring the colony in every direction, visiting in turn Podor, Portudal, Albreda, and the mouth of the Gambia. With increasing perseverance, he collected a rich harvest of facts in the animal, vegetable, and mineral kingdoms.

To him is due the first exact account of a gigantic tree called the Baobab, which is often called Adansonia after him; of the habits of the grasshoppers, which form the chief food of certain wild tribes; of the white ants, and the dwellings they construct; and of a certain kind of oyster, which attach themselves to trees at the mouth of the Gambia. He says:

"The natives have not the difficulty one might anticipate in catching them; they simply cut off the bough to which they cling. They often cluster to the number of over two hundred on one branch, and if there are several branches, they form a bunch of oysters such as a man could scarcely carry."

In spite of the interest of these and similar discoveries, there are few new facts for the geographer to learn. A few words about the Yolofs and Mandingoes comprise all there is to learn. If we followed Adanson throughout his explorations, we should gain little fresh information.

The same cannot be said of the expedition of which we are about to give some account. Major Houghton, captain in the 69th regiment, and English Governor of the Fort of Goree, had been familiar from his youth, part of which was passed with the English Embassy in Morocco, with the manners and customs of the Moors and the negroes of Senegambia. In 1790 he proposed to the African Society to explore the course of the Niger, penetrate as far as Timbuctoo and Houssa, and return by way of the Sahara. The carrying out of this bold plan met with but one obstacle, but that was almost sufficient to upset it.

Houghton left England upon the 16th of October, 1790, and anchored in Jillifree harbor, at the mouth of the Gambia, upon the 10th of November. Well received by the King of Barra, he followed the course of the Gambia to a distance of three hundred leagues, traversed the remainder of Senegambia, and reached Gonda Konda in Yanvi.

Walknaer, in his *History of Voyages,* says, "He purchased a negro, a horse, and five asses, and prepared to proceed with the merchandise which was to pay his expenses to Mendana, the capital of the little kingdom of Woolli. Fortunately his slight knowledge of the Mandingo language enabled him to understand a negress who was speaking of a plot against him. The merchants trading on the river, imagining commerce to be his sole object, and fearing that he might compete with them, had determined upon his death.

"In order to avoid the threatened danger, he thought it wise to deviate from the usual route, and, accordingly, crossed the river with his asses, and reached the northern shore in the kingdom of Cantor."

Houghton then crossed the river a second time, and entered the kingdom of Woolli. He at once sent a messenger to the king, bearing presents, and asking for protection. He was cordially received, and the traveler was welcomed to Mendana, the capital, which he describes as an important town, situated in the midst of a fertile country, in which many herds of cattle graze.

Houghton was justified in anticipating a successful issue to his voyage; everything appeared to presage it, when an event occurred which was the first blow to his hopes. A hut next that in which he slept took fire, and the whole town was soon in flames. His interpreter, who had made several attempts to rob him, seized this opportunity, and fled with a horse and three asses.

Still the King of Woolli continued his protection of the traveler, and loaded him with presents, precious not on account of their value, but as signs of the good-will which they demonstrated. This friend of the Europeans was named Djata. Humane, intelligent, and good-hearted, he wished the English to establish a factory in his kingdom.

Houghton, in a letter to his wife, says:

"Captain Littleton, during a stay of four years here, has amassed a considerable fortune. He possesses several ships which trade up and down the river. At any time one can obtain, for the merest trifle, gold, ivory, wax, and slaves. Poultry, sheep, eggs, butter, milk, honey, and fish are extremely abundant, and for ten pounds sterling a large family might be maintained in luxury. The soil is dry the air very healthy; and the King of Woolli told me that no white man had ever died at Fataconda."

Houghton then followed the Falemé river as far as Cacullo, which in D'Anville's map is called Cacoulon, and whilst in Bambouk gleaned a few facts about the Djoliba river, which runs through the interior of the Soudan. The direction of this river he ascertained to be southward as far as Djeneh, then west by east to Timbuctoo—facts which were later confirmed by Mungo Park. The traveler was cordially received by the King of Bambouk, who provided him with a guide to Timbuctoo, and with cowries to pay his expenses during the journey. It was hoped that Houghton would reach the Niger without accident, when a note, written in pencil and half effaced, reached Dr. Laidley. It was dated from Simbing, and stated that the traveler had been robbed of his baggage, but that he was prosecuting his journey to Timbuctoo. This was followed by accounts from various sources, which gave rise to a suspicion that Houghton had been assassinated in Bambara. His fate was uncertain until it was discovered by Mungo Park.

Walknaer says:

"Simbing, where Houghton wrote the last words ever received from him, is a little walled town on the frontier of the kingdom of Ludamar. Here he was abandoned by his negro servants, who were unwilling to accompany him to the country of the Moors. Still he continued his route, and, after surmounting many obstacles, he advanced to the north, and endeavored to cross the kingdom of Ludamar. Finally he reached Yaouri, and made the acquaintance of several merchants, on their way to sell salt at Tischet, a town situated near the marshes of the great desert, and six days' journey north of Yaouri. Then, by bribing the merchants with a gun and a little tobacco, he persuaded them to conduct him to Tischet. All this would lead us to suppose that the Moors deceived him, either as to the route he should have followed, or as to the state of the country between Yaouri and Timbuctoo.

"After two days' march, Houghton, finding himself deceived, wished to return to Yaouri. The Moors robbed him of all he possessed, and fled. He was forced to reach Yaouri on foot. Did he die of hunger, or was he assassinated by the Moors? This has never been rightly determined, but the spot where he perished was pointed out to Mungo Park."

The loss of Houghton's journals, containing the observations made during his journey, deprived science of the result of all his fatigue and devotion. To ascertain what he accomplished, one must have recourse to the *Proceedings of the African Society*. At this time Mungo Park, a young Scotch surgeon, who had just returned from a voyage to the East Indies on board the *Worcester*, learnt that the African Society were anxious to find an explorer willing to penetrate to the interior of the country watered by the Gambia. Mungo Park, who had long wished to acquaint himself with the productions of the country, and the manners and customs of the inhabitants, offered his services. He was not deterred by the apprehension that his predecessor, Houghton, had probably perished.

At once accepted by the Society, Mungo Park hastened his preparations, and left Portsmouth upon the 22nd of May, 1795. He was furnished with introductions to Dr. Laidley, and a credit of two hundred pounds sterling. Landing at Jillifree, at the mouth of the Gambia, in the kingdom

of Barra, and following the river, he reached Pisania, an English factory belonging to Dr. Laidley. He directed his attention first to acquiring a knowledge of the Mandingo language, which was most generally used, and in collecting the facts most likely to be useful in the execution of his plans.

His stay here enabled him to obtain more accurate information than his predecessors with regard to the Feloups, the Yolofs, and Foulahs, and the Mandingoes. The Feloups are morose, quarrelsome, and vindictive, but faithful and courageous. The Yolofs are a powerful and warlike nation, with very black skins. Except in color and speech, they resemble the Mandingoes, who are gentle and sociable. Tall and well-made, their women are, comparatively speaking, pretty. Lastly, the Foulahs, who are the lightest in color, seem much attached to a pastoral and agricultural life. The greater part of these populations are Mohammedans, and practice polygamy.

Upon the 2nd of December, Mungo Park, accompanied by two negro interpreters, and with a small quantity of baggage, started for the interior. He first reached the small kingdom of Woolli, the capital of which, Medina, comprises a thousand houses. He then proceeded to Kolor, a considerable town, and, after two days' march across a desert, entered the kingdom of Bondou. The natives are Foulahs, professing the Mohammedan religion; they carry on a brisk trade in ivory, when they are not engaged in agriculture.

The traveler soon reached the Falemé river, the bed of which, near its source in the mountains of Dalaba, is very auriferous. He was received by the king at Fataconda, the capital of Bondou, and had great difficulty in convincing him that he traveled from curiosity. His interview with the wives of the monarch is thus described. Mungo Park says:

"I had scarcely entered the court, when I was surrounded by the entire seraglio. Some begged me for physic, some for amber, and all were most desirous of trying the great African specific of *blood-letting*. They are ten or twelve in number, most of them young and handsome, wearing on their heads ornaments of gold or pieces of amber. They rallied me a good deal upon different subjects, particularly upon the whiteness of my skin and the length of my nose.

They insisted that both were artificial. The first, they said, was produced, when I was an infant, by dipping me in milk, and they insisted that my nose had been pinched every day till it had acquired its present unsightly and unnatural conformation."

Leaving Bondou by the north, Mungo Park entered Kajaaga, called by the French Galam. The climate of this picturesque country, watered by the Senegal, is far healthier than that of districts nearer the coast. The natives call themselves Serawoullis, and are called Seracolets by the French. The color of their skin is jet black, and in this respect they are scarcely distinguishable from the Yolofs.

Mungo Park says: "The Serawoullis are habitually a trading people. They formerly carried on a great commerce with the French in gold dust and slaves, and still often supply the British factories on the Gambia with slaves. They are famous for the skill and honesty with which they do business."

At Joag, Mungo Park was relieved of half his property by the envoys of the king, under pretence of making him pay for the right to pass through his kingdom. Fortunately for him, the nephew of Demba-Jego-Jalla, King of Kasson, who was about to return to his country, took him under his protection. They reached Gongadi, where there are extensive date plantations, together, and thence proceeded to Samia, on the shores of the Senegal, on the frontiers of Kasson.

The first town met with in this kingdom was that of Tiesie, which was reached by Mungo Park on the 31st of December. Well received by the natives, who sold him the provisions he needed at a reasonable price, the traveler was subjected by the brother and nephew of the king to endless indignities.

Leaving this town upon the 10th of January, 1796, Mungo Park reached Kouniakari, the capital of Kasson—a fertile, rich, and well-populated country, which can place forty thousand men under arms. The king, full of kindly feeling for the traveler, wished him to remain in his kingdom as long as the wars between Kasson and Kajaaga lasted. It was more than probable that the countries of Kaarta and Bambara, which Mungo Park wished to visit, would be drawn into it. The advice of the king to remain

was prudent, and Park had soon reason enough to regret not having followed it.

But, impatient to reach the interior, the traveler would not listen, and entered the level and sandy plains of Kaarta. He met crowds of natives on the journey who were flying to Kasson to escape the horrors of war. But even this did not deter him; he continued his journey until he reached the capital of Kaarta, which is situated in a fertile and open plain.

He was kindly received by the king, Daisy Kourabari, who endeavored to dissuade him from entering Bambara, and, finding all his arguments useless, advised him to avoid passing through the midst of the fray, by entering the kingdom of Ludamar, inhabited by Moors. From thence he could proceed to Bambara.

During his journey Mungo Park noticed negroes who fed principally upon a sort of bread made from the berries of the lotus, which tasted not unlike gingerbread. This plant, the *rhamnus lotus,* is indigenous in Senegambia, Nigritia, and Tunis.

"So," says Mungo Park, "there can be little doubt of this fruit being the lotus mentioned by Pliny as the food of the Lybian Lotophagi. I have tasted lotus bread, and think that an army may very easily have been fed with it, as is said by Pliny to have been done in Lybia. The taste of the bread is so sweet and agreeable, that the soldiers would not be likely to complain of it."

On the 22nd February, Mungo Park reached Jarra, a considerable town, with houses built of stone, inhabited by negroes from the south who had placed themselves under the protection of the Moors, to whom they paid considerable tribute. From Ali, King of Ludamar, the traveler obtained permission to travel in safety through his dominions. But, in spite of this safe-conduct, Park was almost entirely despoiled by the fanatical Moors of Djeneh. At Sampaka and Dalli, large towns, and at Samea, a small village pleasantly situated, he was so cordially welcomed that he already saw himself in fancy arrived in the interior of Africa, when a troop of soldiers appeared, who led him to Benown, the camp of King Ali.

"Ali," says Mungo Park, "was sitting upon a black morocco cushion, clipping a few hairs on his upper lip—

a female attendant holding a looking glass before him. He was an old man of Arab race, with a long white beard, and he looked sullen and angry. He surveyed me with attention, and inquired of the Moors if I could speak Arabic. Being answered in the negative, he appeared surprised, and continued silent. The surrounding attendants, and especially ladies, were much more inquisitive. They asked a thousand questions, inspected every part of my apparel, searched my pockets, and obliged me to unbutton my waistcoat to display the whiteness of my skin. They even counted my toes and fingers, as if they doubted whether I was in truth a human being."

An unprotected stranger, a Christian, and accounted a spy, Mungo Park was a victim to the insolence, ferocity, and fanaticism of the Moors. He was spared neither insults, outrages, nor blows. They attempted to make a barber of him, but his awkwardness in cutting the hairy face of the king's son exempted him from this degrading occupation. During his captivity he collected many particulars regarding Timbuctoo, which is so difficult of access to Europeans, and was the bourne of all early African explorers.

"Houssa," a shereef told him, "is the largest town I have ever seen. Walet is larger than Timbuctoo, but as it is farther from the Niger, and its principal trade is in salt, few strangers are met there. From Benown to Walet is a distance of six days' journey. No important town is passed between the two, and the traveler depends for sustenance upon the milk procurable from Arabs, whose flocks and herds graze about the wells and springs. The road leads for two days through a sandy desert, where not a drop of water is to be had."

It takes eleven days to go from Walet to Timbuctoo, but water is not so scarce on this journey, which is generally made upon oxen. At Timbuctoo there are a number of Jews who speak Arabic, and use the same forms of prayer as the Moors.

The events of the war decided Ali to proceed to Jarra. Mungo Park, who had succeeded in making friends with the sultan's favorite, Fatima, obtained permission to accompany the king. The traveler hoped, by nearing the scene of action, to manage to escape. As it happened, the King of Kaarta, Daisy Kourabari, soon after marched against

the town of Jarra. The larger number of inhabitants fled, and Mungo Park did the same.

He soon found means to get away, but his interpreter refused to accompany him. He was forced to start for Bambara alone, and destitute of resources.

The first town he came to was Wawra, which properly belongs to Kaarta, but was then paying tribute to Mansong, King of Bambara. Mungo Park says:

"Upon the morning of the 7th of July, as I was about to depart, my landlord, with a great deal of diffidence, begged me to give him a lock of my hair. He had been told, he said, that white men's hair made a *saphic* (talisman) that would give the possessor all the knowledge of the white man. I had never before heard of so simple a mode of education, but I at once complied with the request; and my landlord's thirst for learning was so great that he cut and pulled at my hair till he had cropped one side of my head pretty closely, and would have done the same with the other had I not signified my disapprobation, assuring him that I wished to reserve some of this precious material for a future occasion."

First Gallon and then Mourja, a large town, famous for its trade in salt, were passed, after fatigues and incredible privations. Upon nearing Sego, Mungo Park at last perceived the Djoliba. "Looking forward," he says, "I saw, with infinite pleasure, the great object of my mission—the long-sought-for, majestic Niger, glittering in the morning sun, as broad as the Thames at Westminster, and flowing to the eastward. I hastened to the brink, and, having drunk of the water, lifted up my fervent thanks in prayer to the Great Ruler of all things for having thus far crowned my endeavors with success.

"The fact of the Niger flowing towards the east did not, however, excite my surprise; for, although I had left Europe in great hesitation on this subject, and rather believed it ran in the contrary direction, I had made frequent inquiries during my progress, and had received from negroes of different nations such clear and decisive assurances that its course *was towards the rising sun* as scarce left any doubt in my mind, more especially as I knew that Major Houghton had collected similar information in a similar manner.

"Sego, the capital of Bambara, at which I had now arrived, consists, properly speaking, of four distinct towns; two on the northern bank of the river called Sego Korro and Sego Boo, and two on the southern bank, called Sego Sou Korro and Sego See Korro. They are all surrounded with high mud walls; the houses are built of clay, of a square form, with flat roofs; some of them have two stories, and many of them are whitewashed. Besides these buildings, Moorish mosques are seen in every quarter, and the streets, though narrow, are broad enough for every practical purpose in a country where wheel carriages are unknown. From the best information I could obtain, I have reason to believe that Sego contains altogether about thirty thousand inhabitants. The king of Bambara resides permanently at Sego See Korro; he employs a great many slaves in conveying people over the river; and the money they take, though the fare is only ten cowries for each person, furnishes a considerable revenue to the king in the course of a year."

By advice of the Moors, the king refused to receive the traveler, and forbade him to remain in his capital, where he could not have protected him from ill-treatment. However, to divest his refusal of all appearance of ill-will, he sent him a bag containing 5,000 cowries, of the value of about a pound sterling, to buy provisions. The messenger sent by the king was to serve as guide as far as Sansanding. Protest and anger were alike impossible; Mungo Park could do nothing but follow the orders sent. Before reaching Sansanding, he was present at the harvest of vegetable butter, which is the produce of a tree called Shea.

"These trees," says the narrative, "grow in great abundance all over this part of Bambara. They are not planted by the natives, but are found growing naturally in the woods; and, in clearing land for cultivation, every tree is cut down but the shea. The tree itself very much resembles the American oak; the fruit—from the kernel of which, after it has been dried in the sun, the butter is prepared by boiling in water—has somewhat the appearance of a Spanish olive. The kernel is imbedded in a sweet pulp, under a thin green rind, and the butter produced from it, besides the advantage of keeping a whole year without salt, is whiter, firmer, and, to my palate, of a richer flavor than the best

butter I ever tasted from cows' milk. It is a chief article of the inland commerce of these districts."

Sansanding, a town containing from eight to ten thousand inhabitants, is a market-place much frequented by the Moors, who bring glassware from the Mediterranean forts, which they exchange for gold-dust and cotton. Mungo Park was not able to remain at this place, for the importunities of the natives and the perfidious insinuations of the Moors warned him to continue his route. His horse was so worn out by fatigue and privation that he felt obliged to embark on the river Djoliba or Niger.

At Mourzan, a fishing village upon the northern bank of the river, everything combined to induce Park to relinquish his enterprise. The further he advanced to the eastward down the river, the more he placed himself in the power of the Moors. The rainy season had commenced, and it would soon be impossible to travel otherwise than by boat. Mungo Park was now so poor that he could not even hire a boat; he was forced to rely upon public charity.

To advance further under these circumstances was not only to risk his life, but to place the results of all his fatigues and efforts in jeopardy. To return to Gambia was scarcely less perilous; to do so he must traverse hundreds of miles on foot through hostile countries. Still the hope of returning home might sustain his courage.

"Before leaving Silla," says the traveler, "I thought it incumbent on me to collect from the Moorish and negro traders all the information I could concerning the further course of the Niger eastward, and the situation and extent of the kingdoms in its neighborhood.

"Two days' journey eastward of Silla is the town of Djenneh, which is situated on a small island in the river, and is said to contain as many inhabitants as Sego itself, or any other town in Bambara. At a distance of two days more, the river widens and forms a considerable lake, called Dibby (or the dark lake), concerning the extent of which, all I could learn was that, in crossing it from east to west, the canoes lose sight of land for one whole day. From this lake the water issues in many different streams, which finally become two branches, one flowing to the northeast, the other to the east; but these branches join at Kabra, which is one day's journey to the south of Timbuctoo, and is the port or

shipping-place of that city. The tract of land between the two streams is called Timbala, and is inhabited by negroes. The whole distance by land from Djenneh to Timbuctoo is twelve days' journey. Northeast of Masena is the kingdom of Timbuctoo, the great object of European research, the capital of the kingdom being one of the principal marts for the extensive commerce which the Moors carry on with the negroes. The hope of acquiring wealth in this pursuit, and zeal for propagating their religion, have filled this extensive city with Moors. The king himself and all the chief officers of his court are Moors, and are said to be more intolerant and severe in their principles than any other of the Moorish tribes in this part of Africa."

Mungo Park was then forced to retrace his steps, and that through a country devastated by inundation and heavy rains. He passed through Mourzan, Kea, and Modibon, where he regained his horse; Nyara, Sansanding, Samea, and Sai, which is surrounded by a deep moat, and protected by high walls with square towers; Jabbéa, a large town, from which he perceived high mountain ranges, and Taffara, where he was received with little hospitality.

At the village of Souha, Park begged a handful of grain of a "Dooty," who answered that he had nothing to give away.

"Whilst I was examining the face of this inhospitable old man, and endeavoring to find out the cause of the sullen discontent which was visible in his eye, he called to a slave who was working in the corn-field at a little distance, and ordered him to bring his spade with him. The Dooty then told him to dig a hole in the ground, pointing to a spot at no great distance. The slave with his spade began to dig in the earth, and the Dooty, who appeared to be a man of very fretful disposition, kept muttering to himself until the pit was almost finished, when he repeatedly pronounced the word *ankatod* (good for nothing), *jankra lemen* (a regular plague), which expressions I thought applied to myself. As the pit had very much the appearance of a grave, I thought it prudent to mount my horse, and was about to decamp when the slave, who had gone before to the village, returned with the corpse of a boy about nine or ten years of age, quite naked. The negro carried the body by an arm and leg, and threw it into the pit with a savage indiffer-

ence such as I had never seen. As he covered the body with earth, the Dooty kept repeating *naphula attemata* (money lost), whence I concluded the boy had been his slave."

Mungo Park left Koulikorro, where he had obtained food by writing saphics or talismans for the natives, upon the 21st of August, and reached Bammakoa, where a large salt-market is held. From an eminence near the town he perceived a high mountain range in the kingdom of Kong, whose ruler had a more numerous army than the King of Bambara.

Once more robbed by brigands of all he possessed, the unfortunate traveler found himself, in the rainy season, alone in a vast desert, five leagues from the nearest European settlement, and for the moment gave way to despair. But his courage soon revived; and reaching the town of Sibidoulou, his horse and clothes, which had been stolen from him by Foulah robbers, were restored to him by the *mansa,* or chief. Kamalia, or Karfa Taura advised him to await the cessation of the rainy season, and then to proceed to Gambia with a caravan of slaves. Worn out, destitute, attacked by fever, which for five months kept him prostrate, Mungo Park had no choice but to remain in this place.

Upon the 19th of April the caravan set out. We can readily imagine the joy experienced by Mungo Park when all was ready. Crossing the desert of Jallonka, and passing first the principal branch of the Senegal river, and then the Falemé, the caravan finally reached the shores of the Gambia, and on the 12th of June, 1797, Mungo Park once more arrived at Pisania, where he was warmly welcomed by Dr. Laidley, who had despaired of ever seeing him again.

The traveler returned to England upon the 22d of September. So great was the impatience with which an account of his discoveries, certainly the most important in this part of Africa, was awaited, that the African Society allowed him to publish for his own profit an abridged account of his adventures.

He had collected more facts as to the geography, manners, and customs of the country than all preceding travelers; he had determined the position of the sources of the Senegal and Gambia, and surveyed the course of the Niger or Djoliba—which he proved to run eastwards, whilst the Gambia flowed to the west.

Thus a point, which up to this time had been disputed by geographers, was definitely settled. It was no longer possible to confound the three rivers, as the French geographer Delisle had done, in 1707, when he represented the Niger as running eastward from Bornu, and flowing into the river Senegal on the west. He himself, however, had admitted and corrected this error, in his later maps of 1722 and 1727, no doubt on account of the facts ascertained by André Brue, governor of Senegal.

Houghton, indeed, had learned much from the natives of the course of the Niger through the Mandingo country, and of the relative positions of Sego, Djenném, and Timbuctoo; but it was reserved for Mungo Park to fix positively, from personal knowledge, the position of the two first-named towns, and to furnish circumstantial details of the country, and the tribes who inhabit it.

Public opinion was unanimous as to the importance of the great traveler's exploration, and keenly appreciative of the courage, skill, and honesty exhibited by him.

A short time later, the English government offered Mungo Park the conduct of an expedition to the interior of Australia; but he refused it.

In 1804, however, the African Society determined to complete the survey of the Niger, and proposed to Mungo Park, the command of a new expedition for its exploration. This time the great traveler did not refuse, and upon the 30th of January, 1805, he left England. Two months later he landed at Goree.

He was accompanied by his brother-in-law, Anderson, a surgeon, by George Scott, a draughtsman, and by thirty-five artillery-men. He was authorized to enroll as many soldiers as he liked in his service, and was provided with a credit of five hundred pounds.

"These resources," says Walcknaer, "so vast in comparison with those furnished by the African Society, were, to our thinking, partly the cause of his loss. The rapacious demands of the African kings grew in proportion to the riches they supposed our traveler to possess; and the effort to meet the enormous drain made upon him, was in great part the cause of the catastrophe which brought the expedition to an end."

Four carpenters, one officer and thirty-five artillery-men,

and a Mandingo merchant named Isaac, who was to act as guide, with the leaders of the expedition already mentioned, composed an imposing caravan. Mungo Park left Cayee upon the 27th of April, 1805, and reached Pisania the next day. From this place, ten years earlier, he had started upon his first exploration. Taking an easterly direction, he followed his former route as far as Bambaku, upon the shores of the Niger. When he arrived at this place, the number of Europeans was already reduced to six soldiers and a carpenter; the remainder had succumbed to fatigue, or the fevers incidental to the inundations. The exactions of the various petty chiefs through whose domains the expedition passed had considerably diminished the stock of merchandise.

Mungo Park was now guilty of an act of grave imprudence. Remarking that trade was very active at Sansanding, a town containing eleven thousand inhabitants, and that beads, indigo, antimony, rings, bracelets, and other articles not likely to be spoiled in the transit to England, were freely exhibited for sale, "he opened," says Walcknaer, "a large shop, which he stocked with European merchandise, for sale wholesale and retail; and probably the large profits he made excited the envy of the merchants. The natives of Djenneh, the Moors, and merchants of Sansanding, joined with those of Sego in offering, in the presence of Modibinne, to give the King of Mansong a larger and more valuable quantity of merchandise than he had received from the English traveler, if he would seize his baggage, and then kill him, or send him out of Bambara. But in spite of his knowledge of this fact, Mungo Park still kept his shop open, and he received, as the proceeds of one single day's business, 25,756 pieces of money, or cowries."

Upon the 28th of October Anderson expired, after four months' illness, and Mungo Park found himself once more alone in the heart of Africa. The King of Mansong had accorded him permission to build a boat, which would enable him to explore the Niger.

Naming his craft the *Djoliba,* he fixed upon the 16th of November for his departure.

Here his journal ends, with details on the riverside populations, and on the geography of the countries he was

the first to discover. This journal, when it reached Europe, was published, imperfect as it was, as soon as the sad fact was realized that the writer had perished in the waters of the Djoliba. It contained in reality no new discovery, but it was recognized as useful to geographical science. Mungo Park had determined the astronomical position of the more important towns, and thereby furnished material for a map of Senegambia. The perfecting of this map was entrusted to Arrowsmith, who stated in an advertisement, that, finding wide differences between the positions of the towns as shown in the journal by each day's travel and that furnished by the astronomical observations, it was impossible to reconcile them; but that, in accordance with the latter, he had been obliged to place the route followed by Mungo Park in his first voyage farther north.

It was reserved for the Frenchman Walcknaer to discover a curious discrepancy in Mungo Park's journal. This was a singular error upon the part of the traveler, which neither the English editor nor the French translator (whose work was badly performed) had discovered. Mungo Park in his diary records events as happening upon the 31st of April. As everyone knows that that month has only thirty days, it followed that during the course of his journey the traveler had made a mistake of a whole day, reckoning in his calculations from the evening instead of the morning. Hence important rectifications were necessary in Arrowsmith's map; but none the less, when once Mungo Park's error is recognized, it is evident that to him we owe the first faithful map of Senegambia.

Although the facts that reached the English Government allowed no room for doubt as to the fate of the traveler, a rumor that white men had been seen in the interior of Africa induced the Governor of Senegal to fit out an expedition. The command was entrusted to the negro merchant Isaac, Mungo Park's guide, who had faithfully delivered the traveler's journal to the English authorities. We need not linger over the account of this expedition, but merely relate that which concerns the last days of Mungo Park.

At Sansanding, Isaac encountered Amadi Fatouma, the native who was with Park on the *Djoliba* when he perished, and from him he obtained the following recital:

"We embarked at Sansanding, and in two days reached Silla, the spot where Mungo Park completed his first journey.

"After two days' navigation we reached Djenneh. In passing Dibby, three boats, filled with negroes armed with lances and arrows, but without firearms, approached us. We had passed successively Racbara and Timbuctoo, when we were pursued by these boats, which we repulsed with difficulty, and only after killing several natives. At Gourouma we were attacked by seven boats, but succeeded in repulsing them. Constant skirmishes ensued, with heavy loss to the blacks, until we reached Kaffo, where we remained for a day. We then proceeded down the river as far as Carmusse, and anchored off Gournou. Next day we perceived a Moorish detachment, who allowed us to pass.

"We then entered the country of Houssa. Next day we reached Yaouri, and sent Amadi Fatouma into the town, with presents for the chief and to purchase food. The negro, before accepting the presents, inquired if the white traveler intended to revisit his country. Mungo Park, to whom the question was reported, replied that he should never return."

It is supposed that these words brought about his death. The negro chief, once convinced that he should not see Mungo Park again, determined to keep the presents intended for his king.

Meantime, Amadi Fatouma reached the king's residence, at some distance from the river. The prince, warned of the presence of the white men, sent an army next day to the small village of Boussa, on the river side. When the *Djoliba* appeared it was assailed by a shower of stones and arrows. Park threw his baggage into the river, and jumped in with his companions. All perished.

Thus miserably died the first Englishman who had navigated the Djoliba and visited Timbuctoo. Many efforts were made in the same direction, but almost all were destined to fail.

At the end of the eighteenth century, two of Linnæus's best pupils explored the south of Africa in the interests of natural history. Sparrman undertook to search for animals, and Thunberg for plants. The account of Sparr-

man's expedition, which, as we have said, was interrupted by his voyage in Oceania, after Cook's expedition, was the first to appear. It was translated into French by Le Tourneur. In his preface, which is still allowed to stand, Le Tourneur deplored the loss of the learned explorer, who he said had died during a voyage to the Gold Coast. Just as the work was published, Sparrman reappeared, to the great astonishment of Le Tourneur.

Sparrman had reached Africa upon the 30th of April, 1772, and landed at the Cape of Good Hope. At this time the town was only two miles across each way, including the gardens and plantations adjoining it on one side. The streets were wide, planted with oaks, and the houses were white, or, to Sparrman's surprise, painted green.

His object in visiting the Cape was to act as tutor to the children of a M. Kerste; but upon his arrival in Cape Town, he found that his employer was absent at his winter residence in False Bay. When the spring came round, Sparrman accompanied Kerste to Alphen, a property which he possessed near Constance. The naturalist availed himself of the opportunity to make many excursions in the neighborhood, and attempt the somewhat dangerous ascent of the Table Mountain. By these means he became acquainted with the manners and customs of the Boers, and their treatment of their slaves. The violence of the latter was so great that the inhabitants of the town were obliged to sleep with locked doors, and provided with firearms close at hand.

Nearly all over the colony a rough hospitality ensured a certain welcome for the traveler. Sparrman relates several curious experiences of his own.

"I arrived one evening," he says, "at the dwelling of a farmer named Van der Spooei, a widower, born in Africa, and father of the proprietor of the Red Constance, or the Old Constance.

"Making believe not to see me approach, he remained stationary in the entry of his house. As I approached him, he offered his hand, still without attempting to come forward, and said, 'Good-day! You are welcome! How are you? *Who* are you? A glass of wine perhaps? or a pipe? Will you partake of something?' I answered his questions laconically, and accepted his offers in the same style as they were offered. His daughter, a well-made girl of some

fourteen or fifteen years of age, brought in dinner, which consisted of a fine breast of lamb, stewed with carrots. The meal over, she offered me tea so pleasantly that I was quite puzzled whether to admire the dinner or my charming hostess the most. Both father and daughter showed the greatest kindness and good will. I spoke to my host several times, in hopes of breaking his silence; but his replies were brief; and I observed that he only once commenced a conversation himself, when he pressed me to remain over night in his house. I bid him farewell, deeply impressed with his hospitality."

Sparrman undertook several similar expeditions, among others, one to Hout Bay and Paarl, in which he had frequent occasion to notice the exaggerations to be met with in the narrative of Kolbe, his predecessor.

He intended to continue his explorations during the winter, and projected a journey into the interior, when the fine season should return. When the frigates commanded by Captain Cook, the *Resolution* and *Adventure,* arrived at the Cape, Forster invited the young Swedish naturalist to accompany him; and Sparrman was thus enabled to visit New Zealand, Van Diemen's Land, New Holland, Otaheite, Terra del Fuego, the Antarctic Regions, and New Georgia, before his return to the Cape, where he landed on the 22d of March, 1775.

His first care upon his return was to organize his expedition to the interior; and in order to add to his available resources he practiced medicine and surgery during the winter. A cargo of corn, medicine, knives, tinder-boxes, and spirits for the preservation of specimens was collected, and packed in an immense wagon, drawn by five yoke of oxen.

Sparrman says:

"The conductor of this cart needs dexterity, not only in his management of the animals, but in the use of the whip of African drivers. These instruments are about fifteen feet long, with a thong of the same or greater length, and a tongue of white leather almost three feet long. The driver holds this formidable instrument in both hands, and from his seat in front of the wagon can reach the foremost oxen with it. He distributes his cuts unceasingly, well understanding how and where to distribute them in such a manner that the hide of the animal feels the whip."

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Sparrman was to accompany the wagon on horseback, and was accompanied by a young colonist, named Immelman, who wished to penetrate into the interior for recreation. They started upon the 25th of July, 1775. After passing Rent River, scaling the Hottentot Holland Kloof, and crossing the Palmite, they entered a desert country, interspersed with plains, mountains, and valleys, without water, but frequented by antelopes of various kinds, with zebras and ostriches.

Sparrman soon reached the warm mineral baths at the foot of the Zwartberg, which, at that time, were much frequented, the company having built a house near the mountains. At this point the explorer was joined by young Immelman, and together they started for Zwellendam, which they reached upon the 2d of September. We will give a few of the facts they collected about the inhabitants.

The Hottentots are as tall as Europeans, their hands and feet are small, and their color a brownish yellow. They have not the thick lips of the Kaffirs and natives of Mozambique. Their hair is black and woolly, curly, but not thick. They rub the entire body with fat and soot. A Hottentot who paints himself looks less naked, and more complete, so to say, than one who only rubs himself with grease. Hence the saying, "A Hottentot without paint, is like a shoe without blacking."

These natives usually wear a cloak called karos, made of sheep's skin, with the wool turned inwards. The women arrange it with a long point, which forms a sort of hood, in which they place their children. Both men and women wear leather rings upon their arms and legs—a custom, which gave rise to the fable that this race rolled puddings round their limbs, to feed on from time to time. They also wear copper and iron rings, but these ornaments are less common.

The kraal, or Hottentot village, is a collection of huts in a circle, all very similar, and of the shape of beehives. The doors, which are in the center, are so low that they can only be entered on the knees. The hearth is in the middle of the hut, and the roof has no hole for the escape of the smoke.

The Hottentots must not be confounded with the Bushmen. The latter live only for hunting and robbery; their

skill in throwing poisoned arrows, their courage, and the wildness of their lives, render them invincible.

At Zwellendam, Sparrman saw the quagga, a species of horse, like a zebra in shape, but with shorter ears.

The explorer next visited Mossel Bay, a harbor little used, as it is too much exposed to the west winds; and thence he proceeded to the country of the Houtniquas, or, as Burchell's map calls them, the Antiniquas. This woody country appeared fertile, and the colonists established there are prosperous. Sparrman met with most of the quadrupeds of Africa in this district, such as elephants, leopards, lions, tiger cats, hyenas, monkeys, hares, antelopes, and gazelles.

We will not attempt to follow Sparrman to all the small settlements he visited. An enumeration of the streams, kraals, or villages he passed would convey no information to the reader. Rather let us gather from his narratives a few curious and novel details concerning two creatures which he describes, the sheep of the Cape, and the "honey-guide."

"When a sheep is to be killed," he says, "the very leanest of the flock is selected. It would be impossible to use the others for food. Their tails are of a triangular shape, and are often a foot and a half long, and occasionally six inches thick in the upper part. One of these tails will weigh eight or twelve pounds, and they consist principally of delicate fat, which some persons eat with bread instead of butter. It is used in the preparation of food, and sometimes to make candles."

After describing the two-horned rhinoceros, hitherto unknown, the gnu—an animal in form something between the horse and the ox—the gazelle, the baboon, and the hippopotamus, the habits of whch were previously imperfectly known, Sparrman describes a curious bird, of great service to the natives, which he calls the honey-guide.

"This bird," he says, "is remarkable neither in size nor color. At first sight it would be taken for a common sparrow, but it is a little larger than that bird, of a somewhat lighter color, with a small yellow spot on each shoulder, and dashes of white in the wings and tail.

"In its own interests, this bird leads the natives to the bees' nests, for it is very fond of honey, and it knows that whenever a nest is destroyed, a little honey will be spilled, or left behind, as a recompense for its services.

"It seems to grow hungry in the morning and evening. In any case, it is then that it leaves its nest, and by its piercing cries attracts the attention of the Hottentots or the colonists. The cries are almost always answered by the appearance of natives or settlers, when the bird, repeating its call unceasingly, slowly flies from place to place towards the spot where the bees have made their home. Arrived at the nest, whether it be in the cleft of a rock, in a hollow tree, or in some underground cavity, the guide hovers about it for a few seconds, and then perches hard by, and remains a silent and hidden spectator of the pillage, in which he hopes subsequently to have his share. Of this phenomenon I have myself twice been a witness."

On the 12th of April, 1776, on his way back to the Cape, Sparrman heard that a large lake, the only one in the colony, had been discovered to the north of the Schneuwberg district. A little later, the traveler got back to the Cape, and embarked for Europe with the numerous natural history collections he had made.

About the same time, between 1772-1775, Thunberg, the Swede, whom Sparrman had met at the Cape, made three successive journeys in the interior of Africa. They were not, any more than Sparrman's, actual journeys of discovery; and we owe the acquisition of no new geographical fact to Thunberg. He did not make a vast number of interesting observations on the birds of the Cape, but he did ascertain a few interesting details respecting the various races of the interior, which turned out to be far more fertile than was at first supposed.

Thunberg was followed in the same latitudes by an English officer, Lieutenant William Paterson, whose chief aim was to collect plants and other objects of natural history. He penetrated a little farther north than the Orange River, and into Kaffraria a good deal further east than Fish River.

To him we owe the first notice of the giraffe; and his narrative is rich in important observations on the natural history, structure, and inhabitants of the country.

It is a curious fact that the Europeans attracted to South Africa by zeal for geographical discovery, were far less numerous than those whose motive was love of natural history. We have already mentioned Sparrman, Thunberg,

and Paterson. To this list we must now add the name of the ornithologist Le Vaillant.

Born at Paramaribo, in Dutch Guiana, of French parents, who traded in birds, Le Vaillant visited Europe with them as a mere child, and traversed Holland, Germany, Lorraine, and the Vosges, on his way to Paris. It will readily be understood that this wandering life awoke in him a taste for traveling; and his passion for birds, early excited by the examination of private and public collections, made him eager to enrich science by descriptions and drawings of unknown species.

Now what country would afford the richest ornithological harvest? The districts near the Cape had been explored by botanists, and by a scientific man who had made quadrupeds his chief study; but no one had as yet traversed them to collect birds.

Le Vaillant arrived at the Cape on the 29th of March, 1781, after the loss of his vessel in an explosion, with nothing but the clothes he wore, ten ducats, and his gun.

Others would have been disheartened, but Le Vaillant did not despair of extricating himself from his painful position. Confident in his skill with the gun and the bow, in his strength and agility, as well as in his skill in preparing the skins of animals, and in stuffing birds so that their plumage should retain all its original gloss, the naturalist had soon opened relations with the wealthiest collectors of the Cape.

One of these, an official named Boers, provided Le Vaillant with every requisite for a successful journey, including carts, oxen, provisions, objects for barter, and horses. Even servants and guides were appointed, free of cost, to the explorer. The kind of researches to which Le Vaillant intended to devote himself influenced his mode of traveling. Instead of seeking frequented and beaten tracks, he tried to avoid them, and to penetrate into districts neglected by Europeans, hoping in them to meet with birds unknown to science. As a result he may be said always to have taken nature by surprise, coming into contact with natives whose manners had not yet been modified by intercourse with whites; so that the information he gives us brings savage life, as it really is, more vividly before us than anything told us by his predecessors or successors. The only mistake made by Le Vaillant was the entrusting of the translation

of his notes to a young man who modified them to suit his own notions. Far from taking the scrupulous care to be exact which distinguishes modern editors, he exaggerated facts; and, dwelling too much on the personal qualities of the traveler, he gave to the narrative of the journey a boastful tone very prejudicial to it.

After three months' stay at the Cape and in its neighborhood, Le Vaillant started, on the 18th December, 1781, for a first journey eastwards, and in Kaffraria. His equipment this time consisted of thirty oxen—ten for each of his two wagons, and ten as reserve—three horses, nine dogs, and five Hottentots.

Le Vaillant first crossed the Dutch districts already explored by Sparrman, where he met with vast herds of zebras, antelopes, and ostriches, arriving in due course at Zwellendam, where he bought some oxen, a cart, and a cock—the last serving as an alarm-clock throughout the journey. Another animal was also of great use to him. This was a monkey he had tamed, and promoted to the post, alike useful and honorable, of taster—no one being allowed to touch any fruit or root unknown to the Hottentots till Master Rees had given his verdict upon it.

Rees was also employed as a sentinel; and his senses, sharpened by use and the struggle for life, exceeded in delicacy those of the most subtle Redskin. He it was who warned the dogs of the approach of danger. If a snake approached, or a troop of monkeys were disporting themselves in a neighboring thicket, Rees's terror and his shrieks quickly revealed the presence of a disturbing element.

From Zwellendam, which he left on the 12th of January, 1782, Le Vaillant made his way eastwards, at some little distance from the sea. He pitched his camp on the banks of the Columbia (Duywen Hock) river and made many very successful hunting excursions in a district rich in game, finally reaching Mossel Bay, where the howls of innumerable hyenas frightened the oxen.

A little farther on he entered the country of the Houtniquas, a Hottentot name signifying men filled with honey. Here not a step could be taken without coming upon swarms of bees. Flowers sprang up beneath the feet of the travelers; the air was heavy with their perfume; their varied colors lent such enchantment to the scene that some of the

servants would have liked to halt. Le Vaillant, however, hastened to press on. The whole of this district, down to the sea, is occupied by colonists, who breed cattle, make butter, cultivate timber, and collect honey, sending their merchandise to the Cape for sale.

A little beyond the last post of the company, Le Vaillant, having entered a district peopled by thousands of "turacos," and other rare birds, pitched his hunting camp; but his plans were terribly upset by the continuous fall of heavy rains, the result of which was to reduce the travelers to great straits for want of food.

After many a sudden change of fortune and many hunting adventures, an account of which would be very amusing, though beyond the scope of our narrative, Le Vaillant reached Mossel Bay. Here, with what delight we can easily imagine, he found letters from France awaiting him. One excursion after another was now made in various directions, until Kaffraria was entered. It was difficult to open relations with its people, who sedulously avoided the whites, having suffered the loss of many men and much cattle at their hands. Moreover the Tamboukis had taken advantage of their critical position to invade Kaffraria and commit numerous depredations, whilst the Bosjemans hunted them down unmercifully. Without firearms, and attacked on so many sides at once, the Kaffirs were driven to hiding themselves and were retiring northwards.

As matters stood it was useless to attempt to penetrate into the mountainous districts of Kaffraria, and Le Vaillant retraced his steps. He then visited the Schneuwberg mountains, the Karroo desert and the shores of the Buffalo River, returning to the Cape on the 2d of April, 1783.

The results of this long campaign were important. Le Vaillant obtained some decided information about the Gonaquas, a numerous race which must not be confounded with the Hottentots properly so called, but are probably the offspring of their inter-marriage with the Kaffirs. With regard to the Hottentots themselves, the information collected by Le Vaillant agrees on almost every point with that obtained by Sparrman.

"The Kaffirs seen by Le Vaillant," says Walcknaer, "were most of them taller than either the Hottentots or the Gonaquas. They have neither the retiring jaws nor promi-

nent cheek bones which are so repulsive in the Hottentots, but are less noticeable in the Gonaquas, neither have they the broad flat faces and thick lips of their neighbors the negroes of Mozambique. Their faces, on the contrary, are round, their noses fairly prominent, and their teeth the whitest and most regular of any people in the world. Their complexion is of a clear dark brown; and, but for this one characteristic, says Le Vaillant, any Kaffir woman would be considered very pretty, even beside a European."

During Le Vaillant's sixteen months of absence, the aspect of the Cape had completely changed. When the traveler left he admired the modest bearing of the Dutch women; on his return he found them thinking only of amusement and dress. Ostrich feathers were so much in vogue that they had to be imported from Europe and Asia. All those brought by our traveler were quickly bought up. The birds which he had sent to the colony on every possible opportunity now amounted to one thousand and twenty-four specimens; and Mr. Boers's house, where they were kept, was converted into a regular natural history museum.

Le Vaillant's journey had been so successful that he could not but wish to begin another. Although his friend Boers had returned to Europe, he was able, with the aid of the many other friends he had made, to collect the materials for a fresh trip. On the 15th of June, 1783, he started at the head of a caravan numbering nineteen persons.

We shall not, of course, follow the traveler in his hunting excursions; all we need to know is that he succeeded in making a collection of marvelous birds, that he introduced the first giraffe to Europe, and that he traversed the whole of the vast space between the tropic of Capricorn on the west and the 14th meridian on the east. He returned to the Cape in 1784, he embarked for Europe, and arrived at Paris early in January, 1785.

The first native people met with by Le Vaillant in his second voyage were the Little Namaquas, a race but very little known, and who soon died out—the more readily that they occupied a barren country, subject to constant attacks from the Bosjemans. Although of fair height, they are inferior in appearance to the Kaffirs and Namaquas, to whose customs theirs bear a great resemblance.

The Caminouquas, or Comeinacquas, of whom Le Vail-

lant gives many particulars, exceed them in height. He says:

"They appear taller even than the Gonaquas, although possibly they are not so in reality; but the illusion is sustained by their small bones, delicate and emaciated appearance, and slender limbs. The long mantle of light material which hangs from the shoulder to the ground adds to their height. They look like drawn out men. Lighter in color than the Cape natives, they have better features than the other Hottentot tribes, owing to the fact that their noses are less flat and their cheek bones less prominent."

Of all the races visited by Le Vaillant, the most peculiar and most ancient was that of the Houzonanas, a tribe which had not been met with by any other northern traveler; but they appear identical with the Bechuanas, although the part of the country assigned to them does not coincide with that which they are known to have occupied for many years.

"The Houzonanas," says the narrative, "are small in stature, the tallest being scarcely five feet four in height. These small beings are perfectly proportioned, and are surprisingly strong and active. They have an imposing air of boldness." Le Vaillant considers them the best endowed mentally, and the strongest physically, of all the savage races he has met with. In face they resemble the Hottentots, but they have rounder chins, and they are far less black. They have curly hair, so short that Le Vaillant at first imagined it to be shaven.

One striking peculiarity of the Houzonanas is a large mass of flesh upon the back of the women, which forms a natural saddle, and oscillates strangely with every movement of the body. Le Vaillant describes a woman whom he saw with her child about three years old, who was perched upon his feet behind her, like a footman behind a cabriolet.

We will pass over the traveler's description of the appearance and customs of these various races, many of which are now extinct, or incorporated in some more powerful tribe. Although by no means the least curious portion of his narrative, the details are so exaggerated that we prefer to omit them.

Upon the eastern coast of Africa, a Portuguese traveler, named Francisco José de Lacerda y Almeida, left Mozambique in 1797, to explore the interior. The account of this

expedition to a place which has only lately been revisited, would be of great interest; but unfortunately, so far as we know, his journal has not been published. His name is often quoted by geographers, and they appear to know what countries he visited; but in France, at least, no lengthened notice of this geographer exists which would furnish the details of his exploration. A very few words will convey all that we have been able to collect of the history of a man who made most important discoveries, and whose name has most unfairly been forgotten.

Lacerda, the date and place of whose birth are unknown, was an engineer, and he was professionally engaged in settling the boundary of the frontier between the Spanish and Portuguese possessions in South America. Whilst thus employed, he collected a mass of interesting particulars of the province of Mato Grosso, which are given in the *Rivesta trimensal do Brasil.* We cannot tell what circumstances led him, after this successful expedition, to the Portuguese possessions in Africa; nor is it easy to imagine his motive for crossing South Africa from the eastern shore to the kingdom of Loanda. It is however certain that he left the well-known town of Teté in 1797, in command of an important caravan bound for the States of Cazembé.

This country was governed by a king as renowned for his benevolence and humanity as for his bravery. He inhabited a town called Lunda, which was two miles in extent, and situated upon the eastern shore of the lake called Mofo. It would have been interesting to compare these localities with those that we know of in the same parallels to-day; but the lack of details obliges us to desist, merely observing that the word Lunda was well-known to Portuguese travelers. As regards Cazembé, there is no longer any question as to its position.

Well received by the king, Lacerda remained some twelve days with him, and then proceeded upon his journey. Unfortunately, when a day or two's march from Lunda he succumbed to fatigue and the unhealthiness of the climate.

The native king collected the traveler's notes and journals, and ordered them to be sent with his remains to Mozambique. But unfortunately the caravan entrusted with these precious memorials was attacked, and the remains of the unfortunate Lacerda were left in the heart of Africa.

His notes were brought to Europe by a nephew, who had accompanied the expedition.

We now come to the account of the expeditions undertaken in the east of Africa, foremost amongst which is that of the well-known traveler Bruce. A Scotchman by birth, like so many other African explorers, James Bruce was brought up for the bar; but the sedentary nature of his occupation had little charm for him, and he embraced an opportunity of entering commercial life. His wife died a few years after their marriage, and Bruce started for Spain, where he employed his leisure in studying Arabic monuments. He wished to publish a detailed account of those in the Escorial, but the Spanish Government refused him the necessary permission.

Returning to England, Bruce began to study Eastern languages, and more especially the Ethiopian, which at that time was known only through the imperfect works of Ludolf. One day Lord Halifax half jestingly proposed to him an exploration of the sources of the Nile. Bruce entered enthusiastically into the subject, and set to work to realize it. He overcame every objection, conquered every difficulty, and in June, 1768, left England for the shores of the Mediterranean. Bruce hurriedly visited some of the islands of the Archipelago, Syria, and Egypt. Leaving Djedda he proceeded to Mecca, Lobheia, and arrived at Massowah upon the 19th September, 1769. He had taken care to obtain a firman from the Sultan, and also letters from the Bey of Cairo and the Shereef of Mecca. This was fortunate, for the Nawab, or governor, did all in his power to prevent his entering Abyssinia, and endeavored to make him pay heavily with presents. Abyssinia had been explored by Portuguese missionaries, thanks to whose zeal some information about the country had been obtained, although far less accurate in detail than that which we owe to Bruce. Although his veracity has often been questioned, succeeding travelers have confirmed his many assertions.

From Massowah to Adowa the road rises gradually, and passes over the mountains which separate Tigré from the shores of the Red Sea.

Adowa was not originally the capital of Tigré. A manufacture of a coarse cotton cloth which circulates as current

money in Abyssinia was established there. The soil in the neighborhood is deep enough for the cultivation of corn.

"In these districts," says Bruce, "there are three harvests a year. The first seeds are sown in July and August, when the rain flows abundantly. In the same season they sow 'tocusso,' 'teff,' and barley. About the 20th of November they reap the first barley, then the wheat, and last of all the 'teff.' In some of these they sow immediately upon the same ground without any manure, barley, which they reap in February, and then often sow 'teff,' but more frequently a kind of vetch or pea, called Shimbra; these are cut down before the first rains, which are in April; yet with all the advantages of a triple harvest, which requires neither manure nor any expensive processes, the farmer in Abyssinia is always very poor."

At Fremona, not far from Adowa, are the ruins of a Jesuit convent, resembling rather a fort than the abode of men of peace. Two days' journey further on, one comes to the ruins of Axum, the ancient capital of Abyssinia. "In one square," says Bruce, "which I apprehend to have been the center of the town, there are forty obelisks, none of which have any hieroglyphics on them. The two first have fallen down, but a third a little smaller than them is still standing. They are all hewn from one block of granite, and on the top of that which is standing there is a *patera,* exceedingly well engraved in the Greek style.

"After passing the convent of Abba Pantaleon, called in Abyssinia Mantillas, and the small obelisk on a rock above, we follow a path cut in a mountain of very red marble, having on the left a marble wall forming a parapet about five feet high. At intervals solid pedestals rise from this wall, bearing every token of having served to support colosasl statues of Sirius, the barking Anubis, or the Dog star. One hundred and thirty-three of these pedestals with the marks just mentioned are still in their places, but only two figures of the dog were recognizable when I was there; these, however, though much mutilated, were evidently Egyptian.

"There are also pedestals supporting the figures of the Sphinx. Two magnificent flights of steps, several hundred feet long, all of granite, exceedingly well finished, and still in their places, are the only remains of a magnificent temple. In an angle of this platform where the temple stood, is the

present small church of Axum. This church is a mean, small building, very ill kept and full of pigeons' dung." It was near Axum that Bruce saw three soldiers cut from a living cow a steak for their midday meal.

In his account of their method of cutting the steak Bruce says: "The skin which had covered the flesh that was cut away was left intact, and was fastened to the corresponding part by little wooden skewers serving as pins. Whether they put anything between the skin and the wounded flesh I do not know, but they soon covered the wound with mud. They then forced the animal to rise, and drove it on before them, to furnish them, no doubt, with another meal when they should join their companions in the evening."

From Tigré, Bruce passed into the province of Siré, which derives its name from its capital, a town considerably larger than Axum, but constantly a prey to putrid fevers. Near it flows the Takazzé, the ancient Siris, with its poisonous waters bordered by majestic trees.

In the province of Samen, situated amongst the unhealthy and broiling Waldubba Mountains, and where many monks had retired to pray and do penance, Bruce stayed only long enough to rest his beasts of burden, for the country was not only haunted by lions and hyenas, and infested by large black ants, which destroyed part of his baggage, but also torn with civil war; so that foreigners were anything but safe. This made him most anxious to reach Gondar, but when he arrived typhoid fever was raging fiercely. His knowledge of medicine was very useful to him, and procured him a situation under the governor, which was most advantageous to him, as it rendered him free to scour the country in all directions, at the head of a body of soldiers. By these means he acquired a mass of valuable information upon the government, manners, and customs of the country, and the chief events of its history, which combined to make his work the most important hitherto published about Abyssinia.

It was in the course of one of these excursions that Bruce discovered the sources of the Blue Nile, which he took to be the true Nile. Arrived at the church of St. Michael, at Geesh, where the river is only four paces wide, and some four inches deep, Bruce became convinced that its sources must be in the neighborhood, although his guide assured

him that he must cross a mountain before he found them. The traveler was not to be deceived.

"'Come! come!'" said Bruce, "'no more words. It is already late; lead me to Geesh and the sources of the Nile, and show me the mountain that separates us from it.' He then made me go round to the south of the church, and coming out of the grove of cedars surrounding it, 'This is the mountain,' he said, looking maliciously up into my face, 'that when you were on the other side of it, was between you and the fountains of the Nile; there is no other. Look at that green hillock in the center of that marsh. It is there that the two fountains of the Nile are to be found. Geesh is at the top of the rock, where you see those very green trees. If you go to the fountains, pull off your shoes as you did the other day, for these people are all Pagans, and they believe in nothing that you believe, but only in the Nile, to which they pray every day as if it were God, as you perhaps invoke it yourself.' I took off my shoes, and rushed down the hill towards the little green island, which was about two hundred yards distant. The whole of the side of the hill was carpeted with flowers, the large roots of which protruded above the surface of the ground; and as I was looking down, and noticing that the skin was peeling off the bulbs, I had two very severe falls before I reached the edge of the marsh; but at last I approached the island with its green sod. It was in the form of an altar, and apparently of artificial construction. I was in rapture as I gazed upon the principal fountain which rises in the middle of it. It is easier to imagine than to describe what I felt at that moment, standing opposite the sources which had baffled the genius and courage of the most celebrated men for three thousand years."

Bruce's narrative contains many other curious observations, but we must now pass on to his account of Lake Tzana.

"Lake Tzana," according to his narrative, "is by far the largest sheet of water known in these regions. Its extent, however, has been greatly exaggerated. Its greatest breadth from Dingleber to Lamgue, i. e. from east to west, is thirty-five miles, but it decreases greatly at each end, and in some parts is not above ten miles broad. Its greatest length is forty-nine miles from north to south, measured

from Bab-Baha to a point a trifle to the S. W.¼W. of the spot where the Nile, after flowing through the lake with an ever perceptible current, bends towards Dara in the Allata territory. In the dry season, from October to March, the lake decreases greatly; but when the rains have swollen the rivers, which unite at this place like the spokes of a wheel at the nave, the lake rises, and overflows a portion of the plain. If the Abyssinians, great liars at all times, are to be believed, there are forty-five islands in Lake Tzana; but this number may be safely reduced to eleven. The largest is named Dek, Daka, or Daga; the next in size are Halimoon, on the Gondar side of the lake, Briguida, on the Gorgora side, and Galila, beyond Briguida. All these islands were formerly used as prisons for Abyssinian chieftains, or as retreats by such as were dissatisfied at court, or wished to secure their valuables in troubled times."

And now having visited Abyssinia with Bruce, let us return to the north.

Some light was now being thrown upon the ancient civilization of Egypt. The archæological expedition of Pococke, Norden, Niebuhr, Volney, and Savary had been published in succession, and the Egyptian Society was at work upon the publication of its large and magnificent work. The number of travelers increased daily, and amongst others W. G. Browne determined to visit the land of the Pharaohs.

From his work we learn much alike of the monuments and ruins which make this country so interesting, and of the customs of its inhabitants. The portion of the work relating to Darfur is entirely new, no Europeans having previously explored it. Browne attained a high place among travelers by his discovery that the Bahr-el-Abiad is the true Nile, and because he endeavored not indeed to discover its source, that he could scarcely hope to do, but to ascertain its latitude and course.

Arriving in Egypt upon the 10th of January, 1792, Browne set out upon his first expedition to Siwâh, and discovered, as Horneman did later, the oasis of Jupiter Ammon. He had little more opportunity than his successor for exploring the catacombs and ruins, where he saw many skulls and human remains.

"The ruins of Siwâh," he says, "resembled too much

those of Upper Egypt to leave any doubt that the buildings to which they belonged were built by the same race of men. The figures of Isis and Anubis are easily recognizable on them, and the proportions of their architectural works, though smaller, are the same as those of the Egyptian temples.

"The rocks I noticed in the neighborhood of Siwâh were of the sandstone formation, bearing no relation whatever to the stones of these ruins; so that I should think that the materials for these buildings can not have been obtained on the spot. The people of Siwâh have preserved no credible traditions respecting these objects. They merely imagined them to contain treasures, and to be frequented by demons."

After leaving Siwâh, Browne made various excursions in Egypt, and then settled in Cairo, where he studied Arabic. He left this town upon the 10th of September, 1792, and visited in succession Kaw, Achmin, Gergeh, Dendera, Kazr, Thebes, Assouan, Kosseir, Memphis, Suez, and Mount Sinai; then wishing to enter Abyssinia, but convinced that he could not do so by way of Massowah, he left Assiut for Darfur, with a Soudan caravan, in May, 1793. The caravan halted upon its way to Darfur at the different towns of Ainé, Dizeh, Charyeh, Bulak, Scheb, Selinceh, Leghéa, and Ber-el-Malha.

Being taken ill at Soueini, Browne was detained there, and only reached El-Fascher after a long delay. Here his annoyances and the exactions levied recommenced, and he could not succeed in obtaining an interview with the Sultan. He was forced to spend the winter at Cobbeh, awaiting his restoration to health, which only took place in the summer of 1794. This time of forced inaction was not, however, wasted by the traveler; he acquainted himself with the manners and dialects of Darfur. Upon the return of summer, Browne repaired to El-Fascher, and recommenced his applications for admittance to the Sultan. They were attended with the same unsuccessful results, until a crowning act of injustice at length procured for him the interview he had so long solicited in vain.

"I found," he says, "the monarch Abd-el-Raschman seated on his throne under a lofty wooden canopy, of Syrian and Indian stuffs indiscriminately mixed. The floor in

front of the throne was spread with small Turkey carpets. The meleks (officers of the court) were seated at some little distance off on the right and left, and behind them stood a line of guards, wearing caps ornamented in front with a small copper plate and a black ostrich feather. Each bore a spear in his right hand, and a shield of hippopotamus-hide on the left arm. Their only clothing was a cotton shirt, of the manufacture of the country. Behind the throne were fourteen or fifteen eunuchs, clothed in rich stuffs of various kinds and all manner of colors. The space in front was filled with petitioners and spectators, to the number of more than fifteen hundred. A kind of hired eulogist stood on the monarch's left hand, crying out at the top of his voice during the whole ceremony, 'See the buffalo, the son of a buffalo, the powerful Sultan Abd-el-Raschman El-rashid. May God protect thy life, O master, may God assist thee and render thee victorious.'"

The Sultan promised justice to Browne, and put the matter into the hands of the meleks, but he only obtained restitution of a sixth of that of which he had been robbed.

The traveler had merely entered Darfur to cross it. He found it would be no easy task to leave it, and that in any case he must give up the idea of prosecuting his exploration; he says:

"On the 11th of December, 1795 (after a delay of three months), I accompanied the chatib (one of the principal officers of the country) to the monarch's presence. I shortly stated what I required, and the chatib seconded me, though not with the zeal that I might have wished. To my demand for permission to travel no answer was returned, and the iniquitous despot, who had received from me no less than the value of about 750 piastres in goods, condescended to give me twenty meagre oxen, worth about 120 piastres. The state of my purse would not permit me to refuse even this mean return, and I bade adieu to El-Fascher as I hoped forever."

Browne was not able to leave Darfur till the spring of 1796, when he joined the caravan which was about to return to Egypt.

The town of Cobbeh, although not the resort of the merchants, must be considered the capital of Darfur. It is more than two miles in length, but is extremely narrow,

each house stands in a field surrounded by a palisade, and between each there is a plot of fallow land.

The plain in which the town is situated runs W. S. W., to a distance of some twenty miles. Almost all the inhabitants are merchants, who trade with Egypt. Their number may be estimated at six thousand, the larger proportion being slaves. The entire population of Darfur can not exceed two hundred thousand, but Browne only arrived at this calculation by estimating the number of recruits raised for the war with Kordofan.

"The inhabitants of Darfur," says the narrative, "are of various races. Some, chiefly fakeers or priests and traders, come from the west, and there are a good many Arabs, none of whom are permanent residents. They are of various tribes; the greater number lead a wandering life on the frontiers, where they pasture their camels, oxen, and horses. They are not in such complete dependence on the Sultan as always to contribute to his forces in war, or to pay him tribute in time of peace."

After the Arabs come the people of Zeghawa, which once formed a distinct kingdom, whose chief could put a thousand horsemen in the field. The Zeghawas speak a different dialect from the people of Für. We must also include the people of Bego or Dageou, who are now subject to Darfur, but are the issue of a tribe which formerly ruled the country.

The natives of Darfur are inured to hunger and thirst, but they indulge freely in an intoxicating liquor called *Bouzza* or *Merissé*. Thieving, lying, and dishonesty, with their accompanying vices, prevail largely among them.

"In buying and selling the parent glories in deceiving the son, and the son the parent, and atrocious frauds are committed in the name of God and of the Prophet.

"Polygamy, which it is well known is tolerated by their religion, is indulged in to excess by the people of Darfur. When Sultan Teraub went to war with Kordofan, he took in his retinue five hundred women, leaving as many in his palace. This may at first sight seem ridiculous, but it must be remembered that these women had to grind corn, draw water, dress food, and perform all the domestic work for a large number of people, so that there was plenty for them to do."

Browne's narrative contains many medical observations of interest, and gives valuable advice as to the mode of traveling in Africa, with particulars of the animals, fish, metals, and plants of Darfur. We do not give them here, because they do not contain anything of special interest for us.

CHAPTER VI

ASIA AND ITS INHABITANTS

At the end of the seventeenth century, a traveler named Nicolas Witzen had explored eastern and northern Tartary, and in 1692 published a curious narrative of his journey. This work, which was in Dutch, and was not translated into any other European language, did not win for its author the recognition he deserved. A second edition, illustrated with engravings which were meritorious rather from their fidelity to nature than their artistic merit, was issued in 1705, and in 1785 the remaining copies of this issue were collected, and appeared under a new title. But it attracted little notice, as by this time further and more curious particulars had been obtained.

From the day that the Jesuits first entered the Celestial Empire, they had collected every possible fact with regard to the customs of this immense country, which previous to their stay there had been known only through the extravagant tales of Marco Polo. Although China is the country of stagnation, and customs and fashion always remain much the same in it, the many events which had taken place made it desirable to obtain more exact particulars of a nation with whom Europeans might possibly enter into advantageous friendly relations.

The Jesuits published the result of these investigations in the rare work entitled "Lettres Edifiantes," which was revised and supplemented by a zealous member of their order, Father Du Halde. It would be useless to attempt any reproduction of this immense work, for which a volume would be required, and it is the less necessary as at this day we have fuller and more complete details of the country than are to be found even in the learned father's book. To the Jesuits also belong the merit of many important astronomical observations. facts concerning natural history,

and the compilation of maps, which were till quite lately authorities on remote districts of the country consulted with advantages.

Towards the end of the eighteenth century, Abbé Grosier, of the order of St. Louis du Louvre, published in an abridged form, a new description of China and Tartary. He made use of the work of his predecessor, Du Halde, and at the same time rectified and added to it. After an account of the fifteen provinces of China and Tartary, with the tributary States, such as Corea, Tonking, Cochin China, and Thibet, the author devotes several chapters to the population and natural history of China, whilst he reviews the government, religion, manners, literature, science, and art of the Chinese.

Towards the end of the eighteenth century, the English Government, being desirous of entering into commercial relations with China, sent an Envoy-extraordinary to that country named George Macartney.

This diplomatist had already visited the courts of Europe and Russia, had been governor of the English Antilles and Madras, and Governor General of India.

He had acquired in the course of his travels in such varied climates, and amid such diverse peoples, a profound knowledge of human nature. His narrative of his voyages is rich in facts and observations calculated to give Europeans a true idea of the Chinese character.

Personal accounts of travel are always more interesting than anonymous ones.

Although the great *I* is generally hateful, it is not so in travels, where the assertion *I* have been there, *I* have done such or such a thing, carries weight, and gives interest to the narrative.

Macartney and his suite sailed in a squadron consisting of three vessels, the *Lion*, the *Hindustan*, and the *Jackal*, which left Portsmouth on the 26th September, 1792.

After a few necessary delays at Rio-de-Janeiro, St. Paul and Amsterdam Islands, where some seal-hunters were seen, at Batavia, and Bantam, in Java, and at Poulo Condere, the vessels cast anchor off Turon (Han San) in Cochin China, a vast harbor, of which only a very bad chart was then in existence.

The arrival of the English was at first a cause of un-

easiness to the natives of Cochin China. But when they were once informed of the motives which had brought the English to their country, they sent an ambassador of high rank on board with presents for Macartney, who was shortly afterwards invited to a banquet at the governor's, followed by a dramatic entertainment. During the short stay many notes were taken of the manners and customs of the people, unfortunately too hurriedly to admit of accuracy.

As soon as the sick had recovered and fresh provisions had been obtained the vessels set sail. A short stay was made at the Ladrone Islands, and the squadron then entered the Strait of Formosa, where it encountered stormy weather, and took refuge in Chusan Harbor. During this stay the map of this archipelago was rectified and an opportunity was taken to visit Tinghai, where the English excited as much curiosity as they felt themselves at the sight of the many things which were new to them.

Many of the facts which surprised them are familiar to us, the appearance of the houses, the markets and dress of the Chinese, the small feet of the women, and many other particulars to which we need not refer. We will only allude to the account of the method employed by them in cultivating dwarf trees.

"This stunted vegetation," says Macartney, "seems to be highly appreciated in China, for specimens of it are found in all the larger houses. It is an art peculiar to the Chinese, and the gardener's skill consists in knowing how to produce it. Independently of satisfaction of triumphing over a difficulty, he has the advantage of introducing into rooms plants whose natural size would have precluded such a possibility.

"The following is the method employed in China for the production of dwarfed trees. The trunk of a tree of which it is desired to obtain a dwarfed specimen, is covered as nearly as possible where it separates into branches with clay or mould, over which is placed a linen or cotton covering constantly kept damp. This mould is sometimes left on for a whole year, and throughout that time the wood it covers throws out tender, root-like fibres. Then the portions of the trunk from which issue these fibres, with the branch immediately above them, are carefully separated

from the tree and placed in fresh mould, where the shoots soon develop into real roots, whilst the branch forms the stem of a plant which is in a manner metamorphosed. This operation neither destroys nor alters the productive faculties of the branch which is separated from the parent tree. When it bears fruit or flowers it does so as plentifully as when it was upon the original stem. The extremities of the branches intended to be dwarfed are always pulled off, which precludes the possibility of their growing tall, and forces them to throw out shoots and lateral branches. These shoots are tied with wire, and assume the form the gardener chooses. When it is desired to give an aged appearance to the tree, it is constantly moistened with theriaca or treacle, which attracts to it multitudes of ants, who not content with devouring the sweetmeat, attack the bark of the tree, and eat it away in such a manner as to produce the desired effect."

Upon leaving Chusan, the squadron entered the Yellow Sea, never before navigated by an European vessel. The river Hoang-Ho flows into it, and it is from the immense quantity of yellow mud brought down by it in its long and tortuous course that the sea derives its name.

The English vessels cast anchor in Ten-chou-Fou Bay, and thence entered the gulf of Pekin, and halted outside the bar of Pei-Ho. There being only three or four feet of water on this bar at low tide, the vessels could not cross it.

The mandarins appointed by the government to receive the English ambassador, arrived shortly after, bringing numerous presents; whilst the gifts intended for the emperor were placed in junks, and Macartney went on board a yacht which had been prepared for him.

The first town reached was Takoo, where Macartney received a visit from the viceroy of the province and the principal mandarin. Both were men of venerable and dignified aspect, polite and attentive, and entirely free from obsequiousness.

"It has been rightly said," remarks Macartney, "that a people are as they are made, and the English had continual proof of this truth in the effect produced upon the Chinese character by the fear of the iron power that ruled them. Apart from this fear they were cheerful and confiding, but

in the presence of their rulers they appeared most timid and embarrassed."

In ascending the Pei-Ho towards Pekin, the course was retarded by the many windings of the river. The country through which they passed was highly cultivated, with houses and villages at intervals upon the banks of the river or inland, alternating with cemeteries and pyramids of bags of salt, producing a charming and ever varying landscape. When night approached, lanterns of every hue, fastened to the masts and rigging of the yachts, produced the fantastic effect of many-colored lights.

Tien Tsing signifies "heavenly spot," and the town owes this name to its agreeable climate and clear blue sky, and the fertility of its neighborhood. In this place, the ambassador was received by the viceroy and a legate sent by the emperor. From them Macartney learned that the emperor was at his summer palace in Tartary, and that the anniversary of his birthday was to be celebrated there upon the 13th of September. The ambassador and his suite were therefore to go up by water as far as Tong Schou, about a dozen miles from Pekin, and thence proceed by land to Zhe Hol, where the emperor awaited them. The presents might be sent on afterwards. Although the first intimation was pleasant, the latter was singularly disagreeable to Macartney, for the presents consisted for the most part of delicate instruments, which had been taken to pieces for safety and packed separately. The legate would not consent to their being left where they would be free from danger of being disturbed. Macartney was obliged to obtain the intervention of the viceroy for the protection of these proofs of the genius and knowledge of Europe.

The cortège reached Tien Tsing, a town which appeared as long as London, and contained not less than seven hundred thousand inhabitants. A vast crowd assembled on the banks of the river to see the English pass, and the river swarmed with junks teeming with natives.

The houses in this city are built of blue with a few red bricks, some are two stories high, but that is unusual. Here the English saw the employment of those carriages with sails which had long been considered fabulous. They consist of two barrows made of bamboo, with one large wheel between them.

When there is not sufficient wind to propel the carriage, says the narrative, it is drawn by one man, while another pushes behind and keeps it steady. When the wind is favorable, the sail, which is a mat attached to two sticks placed upon either side of the carriage, renders the help of the man in front unnecessary.

The banks of the Pei-Ho are in many parts protected by breast-works of granite, to arrest inundation, and here and there dikes, also of granite, provided with a sluice, by means of which water is conveyed to the fields below. The country, although well cultivated, was often devastated by famines, following upon inundations, or resulting from the ravages of locusts.

Thus far, the cortège had been sailing through the immense alluvial plain of Pe-tche-Li. Not until the fourth day after leaving Tien Tsing was the blue outline of mountains perceived on the horizon. Pekin was now in sight; and on the 6th of August, 1793, the yachts anchored within two miles of the capital, and half a mile from Tong-Chow-Fow.

In order to leave the presents which could not be taken to Zhe Hol, at the palace, called "The garden of eternal spring," it was necessary to land. The inhabitants of Tong-Chow-Fow, who were already greatly excited by the appearance of the English, were still more amazed at the first sight of a negro servant. His skin, his jet black color, his woolly hair, and all the distinguishing marks of his race, were absolutely novel in this part of China. The people could not remember seeing anything at all like him before. Some of them even doubted if he could be a human being at all, and the children cried out in fear that it was a black devil. But his good humor soon reconciled them to his appearance, and they became accustomed to look upon him without fear or displeasure.

The English were especially surprised at seeing upon a wall the sketch of a lunar eclipse which was to take place in a few days. They ascertained among other facts, that silver is an article of commerce with the Chinese, for they have no coined money, but use ingots bearing only a sign, indicative of their weight. The English were struck with the extraordinary resemblance between the religious ceremonies of Fo and those of the Christians.

Macartney states that certain authors maintain that the apostle Thomas visited China; while the Missionary Tremore contends, that this is merely a fiction palmed upon the Jesuits by the devil himself.

Ninety small carriages, forty-four wheelbarrows, more than two hundred horses, and over three thousand men, were employed in the transport of the presents of the British government to the emperor. Macartney and three of his suite accompanied the convoy in palanquins. An enormous crowd followed them. The English ambassador was greeted at the gates of Pekin by volleys of artillery. Once beyond the fortifications, he found himself in a wide unpaved street, with houses on either side, one or two stories high. Across the street extended a wooden triumphal arch in three partitions, each with a lofty and highly decorated roof.

The embassy afforded ample material for the tales which at this time filled the imagination of the people. It was declared that the presents brought for the emperor consisted of everything that was rare in other countries and unknown in China. It was gravely asserted that among the animals, there was an elephant not larger than a monkey, but as fierce as a lion, and a cock which was fed upon coal. Everything which came from England was supposed to differ from anything hitherto seen in Pekin, and to possess the very opposite qualities to those usual to it.

The wall of the imperial palace was at once recognized by its yellow color. Through the gate were seen artificial hills, lakes and rivers, with small islets, and fantastic buildings amidst the trees.

At the end of a street terminating at the northern wall of the city, was a vast edifice of considerable height, which contained an enormous bell. The English explored the town in various directions, and on the whole were not favorably impressed. They concluded that a Chinaman visiting London, with its bridges and innumerable ships, its squares and monuments, would carry away a better idea of the importance of the capital of Great Britain than they could do of Pekin.

Upon their arrival at the palace, where the presents for the emperor were to be displayed, the governor discussed with Macartney the best way to arrange and display them.

They were finally placed in a large and well-decorated hall, which at the time contained nothing but a throne and a few vases of old china.

It is unnecessary to enter upon the interminable negotiations which rose out of the resolve of the Chinese, that Macartney should prostrate himself before the emperor; which humiliating proposition they had prepared for by the inscription placed upon the yachts and carriages of the embassy, "Ambassador bringing tribute from England."

It is in Pekin that the field is situated which the emperor, in accordance with ancient custom, sows every spring. Here, too, is to be found the "Temple of the Earth," to which the sovereign resorts at the summer solstice, to acknowledge the astral power which lightens the world, and to give thanks for its beneficent influence.

Pekin is merely the seat of the Imperial government in China, and has neither shipping, manufactures, nor trade.

Macartney computes the number of inhabitants at three millions. The one-storied houses in the town appear insufficient for so large a population, but a single house accommodates three generations. This density of the population is the result of the early ages at which marriages are contracted. These hasty unions are often brought about from prudential motives by the Chinese, the children, and especially the sons, being responsible for the care of their parents.

The embassy left Pekin on the 2nd of September, 1793, Macartney, traveling in a post-chaise, probably the first carriage of the kind which ever entered Tartary.

As the distance from Pekin increased, the road ascended and the soil became more sandy, and contained less and less clay and black earth. Shortly afterwards, vast plains, planted with tobacco, were crossed. Macartney imagines tobacco to be indigenous, and not imported from America, and thinks that the habit of smoking was spontaneous in Asia.

The English soon noticed that as the soil became more and more barren, the population decreased. At the same time the Tartar element became larger and larger, and the difference between the manners of the Chinese and their conquerors was less marked.

Upon the fifth day of the journey, the far-famed Great Wall was seen.

"The first glance at this fortified wall," says Macartney, "is enough to give an impression of an enterprise of surprising grandeur. It ascends the highest mountains to their very loftiest peaks, it goes down into the deepest valleys, crossing rivers on sustaining arches, and with its breadth often doubled and trebled to increase its strength whilst at intervals of about a hundred paces rise towers or strong bastions. It is difficult to understand how the materials for this wall were brought to and used in places apparently inaccessible, and it is impossible sufficiently to admire the skill brought to bear upon the task. One of the loftiest mountains over which the wall passes has been ascertained to be no less than 5,225 feet high.

"This fortification—for the simple word 'wall' gives no just idea of the wonderful structure—is said to be 1,500 miles long, but it is not quite finished. The fifteen hundred miles was the extent of the frontier which separates colonized China from the various Tartar tribes. Such barriers as these would not suffice in modern times for nations at war.

"Many of the lesser works in the interior of this grand rampart have yielded to the effects of time, and fallen into ruins; others have been repaired; but the principal wall appears throughout to have been built with such care and skill as never to have needed repairs. It has now been preserved more than two thousand years, and appears as little susceptible of injury as the rocks which nature herself has planted between China and Tartary."

Beyond the wall nature seems to proclaim the entrance into a country; the temperature is colder, the roads are more rugged, and the mountains are less wooded. The number of sufferers from goiter in the Tartar valleys is very considerable, and according to the estimate given by Dr. Gillan, physician to the embassy, comprises a sixth of the population. The portion of Tartary in which this malady rages is not unlike many of the cantons of Switzerland and Savoy.

The valley of Zhe Hol, where the emperor possesses a summer palace and garden, was at length reached. This residence is called "The abode of pleasant freshness," and

the park surrounding it is named the "Garden of innumerable trees." The embassy was received with military honors, amid an immense crowd of people, many of whom were dressed in yellow. These were inferior lamas or monks of the order of Fo, to which the emperor also belonged.

The disputes as to prostration before the emperor begun in Pekin were continued here. At last Tchien Lung consented to content himself with the respectful salutation with which English nobles are accustomed to greet their own sovereign. The reception accordingly took place, with every imaginable pomp and ceremony.

The narrative says:

"Shortly after daybreak the sound of many instruments, and the confused voices of distant crowds, announced the approach of the emperor. He soon appeared, issuing from behind a high mountain, bordered with trees, as if from a sacred grove, and preceded by a number of men who proclaimed his virtues and power in loud voices. He was seated in a chair carried by sixteen men; his guards, the officers of his household, standard and umbrella bearers; and musicians accompanied him. He was clothed in a robe of somber-colored silk, and wore a velvet cap, very similar in shape to that of Scotch mountaineers. A large pearl was conspicuous on his forehead, and was the only jewel or ornament he wore."

Upon entering the tent, the emperor mounted the steps of the throne, which he alone is allowed to ascend. The first minister, Ho Choo-Tang, and two of the chief officers of his household, remained near, and never addressed him but in a kneeling position. When the princes of royal blood, the tributary princes, and state officers, were in their places, the president of the customs conducted Macartney within a foot of the left-hand side of the throne, which in the Chinese court is considered the place of honor. The ambassador was accompanied by the minister plenipotentiary, and followed by his page and interpreter.

Macartney, in accordance with the instructions given him by the president, raised above his head the magnificent square golden box studded with diamonds, which contained the King of England's letter to the emperor. Then mounting the few steps leading to the throne, he bowed the knee,

and, with a short prefatory compliment, presented the box to his Imperial Majesty. The Chinese monarch received it graciously, and said, as he placed it on one side, "That he experienced much satisfaction at the token of esteem and friendship offered by his Britannic Majesty in sending to him an embassy with a letter and rich gifts; that, for his part, he had the like friendly feelings towards the King of Great Britain, and he hoped the same harmony would always continue between their respective subjects."

After a few moments of private conversation with the ambassador, the emperor presented gifts to him and to the minister plenipotentiary. They were then conducted to cushions, in front of which were tables covered with a number of vessels containing meat and fruits. The emperor also partook of these, and continued to overwhelm the ambassadors with expressions of regard and esteem which had a great effect in raising the English in the estimation of the Chinese public. Macartney and his suite were later invited to visit the gardens of Zhe Hol. During their walk in the grounds, the English met the emperor, who stopped to receive their respectful salutations, and order his first minister, who was looked upon as little less than a vice-emperor, and several other grandees to accompany them.

The Chinese conducted the English over a portion of the grounds laid out as pleasure-gardens, which formed only a small portion of the vast enclosure. The rest is sacred to the use of the women of the imperial family, and was as rigorously closed to the Chinese ministers as to the English embassy.

Macartney was then led through a fertile valley, in which there were many trees, chiefly willows of enormous size. Grass grows abundantly between the trees, and its luxuriance is not diminished by cattle or interfered with by mowing. Arriving upon the shores of an irregular lake, of vast extent, the whole party embarked in yachts, and proceeded to a bridge which is thrown across the narrowest part of the lake, and beyond which it appeared to stretch away indefinitely.

Upon the 17th of September Macartney and his suite were present at a ceremony which took place upon the anniversary of the emperor's birthday. Upon the morrow and following days splendid fêtes succeeded each other,

Tchien Lung participating in them with great zest. Dancers on the tight-rope, tumblers, conjurors (of unrivaled skill), and wrestlers, performed in succession. The natives of various portions of the empire appeared in their distinctive costumes and exhibited the different productions of their provinces. Music and dancing were succeeded by fireworks, which were very effective, although they were let off in daylight.

The narrative says:

"Several of the designs were novel to the English. One of them I will describe. A large box was raised to a great height, and the bottom being removed as if by accident, an immense number of paper lamps fell from it. When they left the box they were all neatly folded; but in falling they opened by degrees and sprung one out of the other. Each then assumed a regular form, and suddenly a beautifully colored light appeared. The Chinese seemed to understand the art of shaping the fireworks at their fancy. On either side of the large boxes were smaller ones, which opened in a similar manner, letting fall burning torches, of different shapes, as brilliant as burnished copper, and flashing like lightning at each movement of the wind. The display ended with the eruption of an artificial volcano."

It is the usual custom for the Emperor of China to conclude his birthday festivities by hunting in the forests of Tartary; but in the present case advancing age rendered that diversion unwise, and his Majesty decided to return to Pekin, the English embassy being invited to precede him thither.

Macartney, however, felt that it was time to terminate his mission. In the first place, it was not customary for ambassadors to reside long at the Chinese court; and in the second, the fact that the Chinese emperor defrayed the expenses of the embassy naturally induced him to curtail his stay. In a short time he received from Tchien Lung the reply to the letter of the King of England, and the presents intended for the English monarch, as well as a number for the members of his suite. This Macartney rightly interpreted as his *congé!*

The English went back to Tong Chou Fou by way of the imperial canal. Upon this trip they saw the famous bird "Leutzé," fishing for its master. It is a species of cormor-

ant, and is so well trained that it is unnecessary to place either a cord or ring round its neck to prevent it from swallowing any of its prey.

"Upon every boat or raft there are ten or twelve of these birds, ready to plunge the instant they receive a sign from their masters. It is curious to see them catch enormous fish, and carry them in their beaks."

Macartney mentions a singular manner of catching wild ducks and other water-birds. Empty jars and calabashes are allowed to float upon the water for several days, until the birds are accustomed to the sight of them. A man then enters the water, places one of the jars upon his head, and advancing gently, seizes the feet of any bird which allows him to come near enough; he rapidly immerses it in the water to choke it, and then noiselessly continues his search until his bag is full.

The embassy visited Canton and Macao, and thence returned to England. We need not dwell upon the return voyage.

We must now consider that portion of Asia which may be called the interior. The first traveler to be noticed is Volney.

Everyone knows, by repute at least, his book on Ruins; but his account of his adventures in Egypt and Syria far surpasses it. There is nothing exaggerated in the latter; it is written in a quiet, precise manner, and is one of the most instructive of books. The members of the Egyptian Expedition refer to it as containing exact statements as to climate, the productions of the soil, and the manners of the inhabitants.

Volney prepared himself most carefully for the journey, which was a great undertaking for him. He determined to leave nothing to chance, and upon reaching Syria he realized that he could not possibly acquire the knowledge of the country he desired unless he first made himself acquainted with the language of the people. He therefore retired to the monastery of Mar-Hannd, in Libya, and devoted himself to the study of Arabic.

Later on, in order to learn something of the life led by the wandering tribes of the Arabian desert, he joined company with a sheik, and accustomed himself to the use of a lance, and to live on horseback, thus qualifying himself to

accompany the tribes on their excursions. Under their protection he visited the ruins of Palmyra and Baalbec, cities of the dead, known to us only by name.

"His style of writing," says La Beuve, "is free from exaggeration, and marked by singular exactness and propriety. When, for example, he wishes to illustrate the quality of the Egyptian soil, and in what respect it differs from that of Africa, he speaks of 'this black, light, greasy earth,' which is brought up and deposited by the Nile. When he wishes to describe the warm winds of the desert, with their dry heat, he compares them 'to the impression which one receives upon opening a fierce oven to take out the bread;' according to his description, speaking of the fitful winds, he says 'they are not merely laden with fog, but gritty and powdery, and in reality full of fine dust, which penetrates everything;' and of the sun, he says it 'presents to view but an obscured disk.'"

If such an expression may be used in speaking of a rigid statement of facts, Volney attained to true beauty of expression—to an actual physical beauty, so to speak, recalling the touch of Hippocrates in his "De Aere, Aquis et Locis." Although no geographical discoveries can be imputed to him, we must none the less recognize in him one of the first travelers who had a true conception of the importance of their task. His aim was always to give a true impression of the places he visited; and this in itself was no small merit, at a time when other explorers did not hesitate to enliven their narratives with imaginary details, with no recognition whatever of their true responsibility.

The Abbé Barthélemy, who in 1788 was to publish his "Voyage du jeune Anacharsis," was already exercising a good deal of influence on public taste, by his popularity in society and position as a man of science, and drawing special attention to Greece and the neighboring countries. It was evidently whilst attending his lessons that De Choiseul imbibed his love for history and archæology.

Nominated ambassador at Constantinople, De Choiseul determined to profit by the leisure he enjoyed in traveling as an artist and archæologist through the Greece of Homer and Herodotus. Such a journey was the very thing to complete the education of the young ambassador, who was only twenty-four years of age, and if he knew himself, could

not be said to have any acquaintance with the ways of the world.

Sensible of his shortcomings, he surrounded himself with learned and scientific men, amongst them the Abbé Barthélemy, the Greek scholar, Ansse de Villoison, the poet Delille, the sculptor Fauvel, and the painter Cassas. In fact, in his "Picturesque History of Greece" he himself merely plays the *rôle* of Mæcenas.

M. de Choiseul Gouffier engaged as private secretary a professor, the Abbé Jean-Baptiste Le Chevalier, who spoke Greek fluently. The latter, after a journey to London, where M. de Choiseul's business detained him long enough for him to learn English, went to Italy, and was detained at Venice by severe illness for seven months. After this he joined M. de Choiseul Gouffier at Constantinople.

Le Chevalier occupied himself principally with the site of Troy. Well versed in the Iliad, he sought for, and believed he identified, the various localities mentioned in the Homeric poem.

His able geographical and historical book at once provoked plentiful criticism. Upon the one side learned men, such as Bryant, declared the discoveries made by Choiseul to be illusory, for the reason that Troy, and as a matter of course, the Ten Years Siege, existed only in the imagination of the Greek poet; whilst others, and principally the English portion of his critics, adopted his conclusions. The whole question was almost forgotten, when the discoveries made quite recently by Schliemann reopened the discussion.

Guillaume-Antoine Olivier, who traversed the greater portion of the Western hemisphere, at the end of the last century, had a strange career. Employed by Berthier de Sauvigny to translate a statistical paper on Paris, he lost his patron and the payment for his labors in the first outburst of the Revolution. Wishing to employ his talent for natural history away from Paris, he was nominated, by the minister Roland, to a mission to the distant and little-known portions of the Ottoman Empire. A naturalist, named Bruguère was associated with him.

The two friends left Paris at the end of 1792, and were delayed for four months at Versailles, until a suitable ship was found for them.

They only reached Constantinople at the end of the fol-

lowing May, carrying letters relating to their mission to M. de Semonville. But this ambassador had been recalled, and his successor, M. de Sainte Croix, had heard nothing of their undertaking. What was the best thing to do whilst awaiting the reply to the inquiries sent to Paris by M. de Sainte Croix?

The two friends could not remain inactive. They therefore decided to visit the shores of Asia Minor, and some islands in the Egyptian Archipelago.

The French minister had excellent reasons for not supplying them with much money, and their own resources being limited, they were unable to do more than make a flying visit to these interesting countries.

Upon their return to Constantinople they found a new ambassador, named Verninac, who had received instructions to send them to Persia, where they were to endeavor to awaken the sympathy of the government of France, and to induce it to declare war against Russia.

At this time the most deplorable anarchy reigned in Persia. Usurpers succeeded each other upon the throne, to the great detriment of the welfare of the inhabitants. War was going on in Khorassan at the time that Olivier and Bruguère arrived. An opportunity occurred for them to join the shah in a country as yet unvisited by any European; but unfortunately Bruguère was in such bad health that they were not only forced to lose the chance, but were detained for four months in an obscure village buried amongst the mountains.

In September, 1796, Mehemet returned to Teheran. His first act was to order a hundred Russian sailors whom he had taken prisoners on the Caspian Sea, to be put to death, and their limbs to be nailed outside his palace walls—a disgusting trophy worthy of the butcher tyrant.

The following year Mehemet Ali was assassinated, and his nephew, Fehtah-Ali Shah, succeeded him, after a short struggle.

It is difficult for Olivier to discharge his mission with this constant change of reigning sovereigns. He was forced to renew his negotiations with each succeeding prince. Finally, the travelers, realizing the impossibility of obtaining anything definite under such circumstances, returned to Europe, and left the question of alliance between

France and Persia to a more favorable season. They stopped upon their homeward journey at Baghdad, Ispahan, Aleppo, Cyprus, and Constantinople.

Although this journey had been fruitless as regarded diplomacy, and had contributed no new discoveries to geography, Cuvier, in his eulogy of Olivier, assures us that, so far as natural history was concerned, much had been achieved. This may be the better credited, as Olivier was elected to the Institute as the successor to Daubenton.

Cuvier, in academic style, says that the narrative of the voyage published, in three quarto volumes, was warmly received by the public.

"It has been said," he continues, "that it might have been of greater interest if the censor had not eliminated certain portions; but allusions were found throughout the whole volume, which were inadmissible, as it does not do to say all we know, especially of Thamas Kouli Khan.

"M. Olivier had no greater regard for his assertions than for his fortune; he quietly omitted all that he was told to leave out, and restricted himself to a quiet and simple account of what he had seen."

A journey from Persia to Russia is not difficult; and was less so in the eighteenth century than to-day. As a matter of fact, Russia only became an European power in the days of Peter the Great. Until the reign of that monarch she had been in every particular—manners, customs, and inhabitants—Asiatic. With Peter the Great and Catherine II., however, commerce revived, high roads were made, the navy was created, and the various tribes became united into one nation.

The empire was vast from the first, and conquest has added to its extent. Peter the Great ordered the compilation of charts, sent expeditions round the coast to collect particulars as to the climate, productions, and races of the different provinces of his empire; and at length he sent Behring upon the voyage which resulted in the discovery of the straits bearing his name.

The example of the great emperor was followed by his successor, Catherine II. She attracted learned men to her court, and corresponded with the savants of the whole world. She succeeded in impressing the nations with a favorable idea of her subjects. Interest and curiosity were

awakened, and the eyes of western Europe were fixed upon Russia. It became recognized that a great nation was arising, and many doubts were entertained as to the result upon European interests. Prussia had already changed the balance of power in Europe, by her victories under Frederick II.; Russia possessed resources of her own, not only in men, but in silver and riches of every kind—still unknown or untested.

Thus it came to pass that publications concerning that country possessed an attraction for politicians, and those interested in the welfare of their country, as well as for the scientific men to whom descriptions of manners and customs foreign to their experience were always welcome.

No work had hitherto excelled that of the naturalist Pallas, which was translated into French between 1788-1793. It was a narrative of a journey across several provinces of the Russian empire. Its success was well deserved.

Peter Simon Pallas was a German naturalist, who had been summoned to St. Petersburg by Catherine II. in 1668, and elected by her a member of the Academy of Sciences. She understood the art of enlisting men in her service by her favors. Pallas, in acknowledgment of them, published his account of fossil remains in Siberia. England and France had just sent expeditions to observe the transit of Venus. Russia, not to be behindhand, despatched a party of learned men, of whom Pallas was one, to Siberia.

Seven astronomers and geometers, five naturalists, and a large number of pupils, made up the party, which was thoroughly to explore the whole of the vast territory.

For six whole years Pallas devoted himself to the successive explorations of Orenburg upon the Jaik, the rendezvous of the nomad tribes who wander upon the shores of the Caspian Sea; Gouriel, which is situated upon the borders of the great lake which is now drying up; the Ural Mountains, with their numberless iron mines; Tobolsk, the capital of Siberia; the province of Koliwan, upon the northern slopes of the Atlas; Krasnojarsk, upon the Jenissei; and the immense lake of Bakali, and Daouria, on the frontiers of China. He also visited Astrakan; the Caucasus, with its varied and interesting inhabitants; and finally, he explored the Don, returning to St. Petersburg on the 30th of July, 1774.

It may well be believed that Pallas was no ordinary traveler. He was not merely a naturalist; he was interested in everything that affects humanity; geography, history, politics, commerce, religion, science, art, all occupied his attention; and it is impossible to read his narrative without admiring his enlightened patriotism, or without recognizing the penetration of the sovereign who understood the art of securing his services.

When his narrative was once arranged, written, and published, Pallas had no idea of contenting himself with the laurels he had gained. Work was his recreation, and he found occupation in assisting in the compilation of a map of Russia.

His natural inclinations led him to the study of botany, and by his works upon that subject he obtained a distinctive place among Russian naturalists.

One of his later undertakings was a description of southern Russia, a physical and topographical account of the province of Taurius—a work which, originally published in French, was afterwards translated into English and German.

Delighted with this country, which he had visited in 1793-94, he desired to settle there. The empress bestowed some of the crown lands upon him, and he transported his family to Simpheropol.

Pallas profited by the opportunity to undertake a new journey in the northern provinces of the empire, the Steppes of the Volga, and the countries which border the Caspian Sea as far as the Caucasus. He then explored the Crimea. He had seen parts of the country twenty years before, and he now found great changes. Although he complains of the devastation of the forests, he commends the increase of agricultural districts, and the centers of industries which had been created. The Crimea is known to be considerably improved since that time—it is impossible to foresee what it may yet become.

Enthusiastic though he was at first in his admiration of this province, Pallas was exposed to every kind of treachery on the part of the Tartars. His wife died in the Crimea; and finally, disgusted with the country and its inhabitants, he returned to Breton to end his days. He died there on the 8th of September, 1811.

He left two important works, from which naturalists,

geographers, statesmen, and merchants, were able to gather much trustworthy information upon countries then but little known, and the commodities and resources of which were destined to have a large influence over European markets.

CHAPTER VII
THE TWO AMERICAS

We have more than once had occasion to speak of expeditions for the survey of the coasts of America. We have told of the attempts of Fernando Cortes and of the voyages and explorations of Drake, Cook, La Perouse, and Marchand. It will be well now to go back for a time, and with Fleurieu sum up the series of voyages along the western coast of America, to the close of the eighteenth century.

In 1537, Cortes with Francisco de Ulloa, discovered the huge peninsula of California, and sailed over the greater part of the long and narrow strait now known as the Vermilion Sea.

He was succeeded by Vasquez Coronado and Francisco Alarcon, who—the former by sea, and the latter by land—devoted themselves to seeking the channel which was erroneously supposed to connect the Atlantic and Pacific. They did not, however, penetrate beyond 36° N. lat.

Two years later, in 1542, the Portuguese Rodrique de Cabrillo, reached 44° north latitude, where the intense cold, sickness, want of provisions, and the bad state of his vessel, compelled him to turn back. He made no actual discovery, but he ascertained that, from Port Natividad to the furthest point reached by him, the coast line was unbroken. The channel of communication seemed to recede before all explorers.

The little success met with appears to have discouraged the Spaniards, for at this time they retired from the ranks of the explorers. It was an Englishman, Drake, who, after having sailed along the western coast as far as the Straits of Magellan, and devastated the Spanish possessions, reached the forty-eighth degree, explored the whole coast, and, returning the same way, gave to the vast districts included within ten degrees the name of New Albion.

Next came, in 1592, the greatly fabulous voyage of Juan

de Fuca, who claimed to have found the long-sought Strait of Anian, when he had but found the channel dividing Vancouver's Island from the mainland.

In 1602 Viscaino laid the foundations of Port Monterey in California, and forty years later took place that much contested voyage of Admiral De Fuente, or De Fonte according as one reckons him a Spaniard or a Portuguese, which has been the text of so many learned discussions and ingenious suppositions. To him we owe the discovery of the Archipelago of St. Lazarus above Vancouver's Island; but all that he says about the lakes and large towns he claims to have visited must be relegated to the realms of romance, as well as his assertion that he discovered a communication between the two oceans.

In the eighteenth century the assertions of travelers were no longer blindly accepted. They were examined and sifted, those parts only being believed which accorded with the well-authenticated accounts of others. Bauch, Delisle, and above all Fleurieu, inaugurated the prolific literature of historical criticism, and we have every reason to be grateful to them.

The Russians, as we know, had greatly extended the field of their knowledge, and there was every reason to suppose that their hunters and Cossacks would soon reach America, if, as was then believed, the two continents were connected in the north. But from such unprofessional travelers no trustworthy scientific details could be expected.

A few years before his death the Emperor Peter I. drew up, with his own hands, a plan of an expedition, with instructions to its members, which he had long had in view, for ascertaining whether Asia and America are united, or separated by a strait.

The arsenal and forts of Kamtchatka being unable to supply the necessary men, stores, etc., captains, sailors, equipment, and provisions, had to be imported from Europe.

Vitus Behring, a Dane, and Alexis Tschirikow, a Russian, who had both given many a proof of skill and knowledge, were appointed to the command of the expedition, which consisted of two vessels built at Kamtchatka. They were not ready to put to sea until July 20th, 1720. Steering northeast along the coast of Asia, of which he never for a moment lost sight, Behring discovered, on the 15th Au-

gust, in 67° 18′ north latitude, a cape beyond which the coast stretched away westwards.

In this first voyage Behring did not apparently see the coast of America, though he probably passed through the strait to which posterity has given his name. The fabulous strait of Anian gave place to Behring Strait. A second voyage made by the same explorers the following year was without results.

Not until June 4th, 1741, were Behring and Tschirikow in a position to start again. This time they meant to bear to the east after reaching 50° north latitude till they should come to the coast of America; but the two vessels were separated in a gale of wind on the 28th August, and were unable to find each other again throughout the trip. On the 18th July, Behring discerned the American continent in 58° 28′ north latitude and the succeeding days were devoted to the survey of the vast bay between Capes St. Elias and St. Hermogenes.

Behring spent the whole of August in sailing about the islands known as the Schumagin Archipelago, off the peninsula of Alaska; and after a struggle, lasting until the 24th September, with contrary winds, he sighted the most southerly cape of the peninsula, and discovered part of the Aleutian group.

Exhausted by long illness, however, the explorer was now no longer able to direct the course of his vessel, and could not prevent her from running aground on the little island bearing his name. There, on the 8th December, 1741, this brave man and skillful explorer perished miserably.

The remnant of his crew who survived the fatigues and privations of winter in this desolate spot, succeeded in making a large sloop of the remains of the vessel, in which they returned to Kamtchatka.

Meanwhile Tschirikow, after waiting for his superior officer until the 25th June, made land between 55° 56′ north latitude, where he lost two boats with their crews, without being able to find out what had become of them.

The way was now open, and adventurers, merchants, and naval officers eagerly rushed in, directing their efforts carefully to the Aleutian Islands and the peninsula of Alaska.

The expeditions sent out by the English, and the progress

made by the Russians, had, however, aroused the jealousy and anxiety of the Spanish, who feared lest their rivals should establish themselves in a country nominally belonging to Spain, though she owned not a single colony in it.

The Viceroy of Mexico now remembered the discovery of an excellent port by Viscaino, and resolved to found a "presidio" there. Two expeditions started simultaneously, the one by land, under Don Gaspar de Partola, the other by sea, consisting of two packets, the *San Carlos* and *San Antonio,* and after a year's search found again the harbor of Monterey, alluded to by Viscaino.

After this expedition the Spanish continued the exploration of the Californian coast. The most celebrated voyages were those of Don Juan de Ayala and of La Bodega, which took place in 1775, and resulted in the discovery of Cape Engano and Guadalupe Bay. Next to these rank the expeditions of Arteaga and Maurelle.

We have already related what was done by Cook, La Pérouse, and Marchand, so we can pass on to say a few words on the expeditions of Vancouver. This officer, who had accompanied Cook on his second and third voyages, was naturally appointed to the command of the expedition sent out by the English government with a view to settling the disputes with the Spanish government as to Nootka Sound.

George Vancouver was commissioned to obtain from the Spanish authorities the formal cession of this great harbor, of such vast importance to the fur trade. He was then to survey the whole of the northwest coast, from 30° north latitude to Cook's River in 61° north latitude. Lastly, he was to give special attention to the Strait of De Fuca and the bay explored in 1749 by the *Washington.*

The two vessels, the *Discovery* of 340 tons, and the *Chatham* of 135—the latter under the command of Captain Broughton—left Falmouth on the 1st of April, 1791. After touching at Teneriffe, Simon Bay, and the Cape of Good Hope, Vancouver steered southwards, sighted St. Paul's Island, and sailed towards New Holland, between the routes taken by Dampier and Marion, and through latitudes which had not yet been traversed. On the 27th September was sighted part of the coast of New Holland, ending in abrupt and precipitous cliffs, to which the name of Cape Chatham was given. As many of his crew were down

with dysentery, Vancouver decided to anchor in the first harbor he came to, to get water, wood, and above all provisions, of which he stood sorely in need. Port George III. was the first reached, where ducks, curlews, swans, fish, and oysters abounded; but no communication could be opened with the natives, although a recently abandoned village of some twenty huts was seen.

We need not follow Vancouver in his cruise along the southwest coast of Holland, as we shall learn nothing new from it.

On the 28th November Van Diemen's Land was doubled, and on the 2nd December the coast of New Zealand was reached and anchor cast by the two vessels in Dusky Bay. Here Vancouver completed the survey left unfinished by Cook. A gale soon separated the *Discovery* from the *Chatham,* which was found again in Matavai Bay, Tahiti. During the voyage there from Dusky Bay, Vancouver discovered some rocky islands, which he called the Snares, and a large island named Oparra, whilst Captain Broughton had discovered Chatham Island, on the east of New Zealand. The incidents of the stay at Tahiti resemble those of Cook's story too closely for repetition.

On the 24th January the two vessels started for the Sandwich Islands, and stopped for a short time off Owyhee, Waohoo, and Ottoway. Since the murder of Cook many changes had taken place in this archipelago. English and American vessels now sometimes visited it to take whales, or trade in furs, and their captains had given the natives a taste for brandy and firearms. Quarrels between the petty chiefs had become more frequent, the most complete anarchy prevailed everywhere, and the number of inhabitants was already greatly diminished.

On the 17th March, 1792, Vancouver left the Sandwich Islands and steered for America, of which he soon sighted the part called by Drake New Albion. Here he almost immediately met Captain Grey, who was supposed to have penetrated, in the *Washington,* into De Fuca Strait, and discovered a vast sea. Grey at once disavowed the discoveries with which he was so generously credited, explaining that he had only sailed fifty miles up the strait, which runs from east to west till it reaches a spot where, according to some natives, it veers to the north and disappears.

Vancouver in his turn entered De Fuca Strait, and recognized Discovery Port, Admiralty Entry, Birch Bay, Desolation Sound, Johnston Strait, and Broughton Archipelago. Before reaching the northern extremity of this long arm of the sea, he met two small Spanish vessels under the command of Quadra. The two captains compared notes, and gave their names to the chief island of the large group known collectively as New Georgia.

Vancouver next visited Nootka Sound and the Columbia River, whence he sailed to San Francisco, off which he anchored. It will be understood that it is impossible to follow the details of the minute survey of the vast stretch of coast between Cape Mendoçino and Port Conclusion, in north latitude 56° 37′, which required no less than three successive trips.

" Now," says the great navigator, " that we have achieved the chief aim of the king in ordering this voyage, I flatter myself that our very detailed survey of the northwest coast of America will dispel all doubts, and do away with all erroneous opinions as to a northwest passage; surely no one will now believe in there being a communication between the North Pacific and the interior of the American continent in the part traversed by us."

Leaving Nootka, to survey the coast of South America before returning to Europe, Vancouver touched at the small Cocoanut Island—which, as we have already observed, little deserves its name—cast anchor off Valparaiso, doubled Cape Horn, took in water at St. Helena, and re-entered the Thames on the 12th September, 1795.

The fatigue incidental to this long expedition had so undermined the health of the explorer that he died in May, 1798, leaving the account of his voyage to be finished by his brother.

Throughout the arduous survey, occupying four years, of 900 miles of coast, the *Discovery* and *Chatham* lost but two men. It will be seen from this how apt a pupil of Cook the great navigator was; and we do not know whether most to admire in Vancouver his care for his sailors and humanity to the natives, or the wonderful nautical skill he displayed in this dangerous cruise.

While explorers thus succeeded each other on the western coast of America, colonists were not idle inland. Al-

ready established on the borders of the Atlantic, where a series of states had been founded from Florida to Canada, the white men were now rapidly forcing their way westwards. Trappers, and *coureurs des bois*, as the French hunters were called, had discovered vast tracts of land suitable for cultivation, and many English squatters had already taken root, not, however, without numerous conflicts with the original owners of the soil, whom they daily tried to drive into the interior. Emigrants were soon attracted in large numbers by the fertility of a virgin soil, and the more liberal constitutions of the various states.

Their number increased to such an extent, that at the end of the seventeenth century the heirs of Lord Baltimore estimated the produce of the sale of their lands at three thousand pounds; and in the middle of the following century, 1750, the successors of William Penn also made a profit ten times as great as the original price of their property. Yet emigration was even then not sufficiently rapid, and convicts were introduced. Maryland numbered 1,981 in 1750. Many scandalous abuses also resulted from the compulsory signing by new comers of agreements they did not understand.

Although the lands bought of the Indians were far from being all occupied, the English colonists continued to push their way inland, at the risk of encounters with the legitimate owners of the soil.

In the north the Hudson's Bay Company, holding a monopoly of the fur trade, were always on the lookout for new hunting grounds, for those originally explored were soon exhausted. Their trappers made their way far into the western wilds, and gained valuable information from the Indians whom they pressed into their service, and taught to get drunk. By this means the existence of a river flowing northwards, past some copper mines, from which some natives brought fine specimens to Fort Prince of Wales, was ascertained. The company at once, i. e., in 1769, decided to send out an expedition, to the command of which they appointed Samuel Hearn.

For a journey to the Arctic regions, where provisions are difficult to obtain, and the cold is intense, a few well-seasoned men are required, who can endure the fatigue of an arduous march over snow, and bear up against hunger.

Hearn took with him only two whites, and a few Indians on whom he could depend.

In spite of the great skill of the guides, who knew the country, and were familiar with the habits of the game it contained, provisions soon failed. Two hundred miles from Fort Prince of Wales the Indians abandoned Hearn and his two companions, who were obliged to retrace their steps.

The chief of the expedition, however, was a rough sailor, accustomed to privations, so he was not discouraged. If he had failed the first time, there was no reason why a second attempt should not succeed.

In March, 1770, Hearn started again to try and cross the unknown districts. This time he was alone with five Indians, for he had noticed that the inability of the whites to endure fatigue excited the contempt of the natives. He had penetrated 500 miles when the severity of the weather compelled him to wait for a less severe temperature. He had had a terrible experience. At one time, to have, indeed, more game than can be eaten; but more often to have no food whatever, and be compelled for a week at a time to gnaw old leather, pick bones which had been thrown aside, or to seek, often in vain, for a few berries on the trees; and lastly, to endure fearful cold—such is the life of an explorer in these Arctic regions.

Hearn started once more in April, wandered about the woods until August, and had arranged to spend the winter with an Indian tribe which had received him well, when an accident which deprived him of his quadrant compelled him to continue his journey.

Privations, miseries, and disappointments, had not quenched the ardor of Hearn's indomitable spirit. He started again on the 7th December, and penetrating westwards below the 60th parallel north latitude, he came to a river. Here he built a canoe, and went in it down the stream, which flowed into an innumerable series of large and small lakes. Finally, on the 13th July, 1771, he reached the Coppermine River. The Indians with him now declared that they had been for some weeks in the country of the Esquimaux, and that they meant to massacre all they should meet of that hated race.

"Coming," says Hearn, "upon a party of Esquimaux

asleep in their tents, the Indians fell upon them suddenly, and I was compelled to witness the massacre of the poor creatures."

Of twenty individuals, not one escaped the sanguinary rage of the Indians; and they put to death with indescribable tortures an old woman who had in the first instance eluded them.

"After this horrible carnage," says Hearn, "we sat down on the grass, and made a good dinner off fresh salmon."

Here the river widened considerably. Had Hearn arrived at its mouth? The water was still quite sweet. There were, however, signs of a tide on the shores, and a number of seals were disporting themselves in the water. A quantity of whale blubber was found in the tents of the Esquimaux. Everything in fact combined to prove that the sea was near. Hearn seized his telescope, and saw stretching before him a huge sheet of water, dotted with islands. There was no longer any doubt; it was the sea!

On the 30th June Hearn got back to the English posts, after an absence of no less than a year and five months.

The company recognized the immense service just rendered by Hearn, by appointing him Governor of Fort Prince of Wales. During his expedition to Hudson's Bay, La Perouse visited this post, and there found the journal of Samuel Hearn's expedition. The French navigator returned it, on condition that he would publish it. We do not know why its appearance in accordance with the promise given by the English traveler to the French sailor was delayed until 1795.

Not until the close of the eighteenth century did the immense chain of lakes, rivers, and portages become known, which, emanating from Lake Superior, receive all the waters flowing from the Rocky Mountains, and divert them to the Arctic Ocean. It was to the brothers Frobisher, fur traders, and to a Mr. Pond, who reached Athabasca, that their discovery is partially due.

Thanks to their efforts, traveling in these parts became less difficult. One explorer succeeded another, posts were established, and the country was opened to all comers. Soon after a rumor was spread of the discovery of a large river flowing in a northwesterly direction.

It was Alexander Mackenzie who gave his name to it. Starting on the 3rd June, 1789, from Fort Chippewyan, on the southern shores of the Lake of the Hills, accompanied by a few Canadians, and several Indians who had been with Samuel Hearn, he reached 67° 45′ north latitude, where he heard that the sea was not far off on the east, but that he was even nearer to it on the west. It was evident that he was quite close to the northwestern extremity of America.

On the 12th July, Mackenzie reached a large sheet of shallow water covered with ice, which he could not believe to be the sea, though no land could be seen on the horizon. It was, however, the Northern Ocean, as he became assured when he saw the water rising, although the wind was not violent. The tide was coming in! The traveler then gained an island at a little distance from the shore, from which he saw several whales gamboling in the water. He therefore named the island, which is situated in north latitude 69° 11′, Whale Island. On the 12th September the expedition safely returned to Fort Chippewyan.

Three years later Mackenzie, whose thirst for discovery was unslaked, ascended Peace River, which rises in the Rocky Mountains. In 1793, after forcing his way across this rugged chain, he made out on the other side the Tacoutche-Tesse River, which flows in a southwesterly direction. In the midst of dangers and privations more easily imagined than described, Mackenzie descended this river to its mouth, below Prince of Wales Island. There, he wrote with a mixture of grease and vermilion, the following laconic but eloquent inscription on a wall of rock: "Alexander Mackenzie, come from Canada overland, July 22nd, 1793." On the 24th August he re-entered Fort Chippewyan.

In South America no scientific expedition took place during the first half of the eighteenth century. We have now only to speak of Condamine. We have already told of his discoveries in America, explaining how when the work was done he had allowed Bouguer to return to Europe, and left Jussieu to continue the collection of unknown plants and animals which was to enrich science, whilst he himself went down the Amazon to its mouth.

"Condamine," says Maury in his *Histoire de l'Académie*

des Sciences, "may be called the Humboldt of the eighteenth century. An intellectual and scientific man, he gave proof in this memorable expedition of an heroic devotion to the progress of knowledge. The funds granted to him by the king for his expedition were not sufficient; he added 100,000 livres from his private purse; and the fatigue and suffering he underwent led to the loss of his ears and legs. The victim of his enthusiasm for science, on his return home was met with nothing but ridicule and sarcasm from a public who could not understand a martyr who aimed at winning anything but Heaven. In him was recognized, not the indefatigable explorer who had braved so many dangers, but the infirm and deaf M. de Condamine, who always held his ear-trumpet in his hand. Content, however, with the recognition of his fellow-savants, to which Buffon gave such eloquent expression in his reply to the address at his reception at the French Academy, Condamine consoled himself by composing songs; and maintained until his death, which was hastened by all he had undergone, the zeal for information on all subjects, even torture, which led him to question the executioner on the scaffold of Damiens."

Few travelers before Condamine had had an opportunity of penetrating into Brazil. The learned explorer hoped, therefore, to render his journey useful by making a map of the course of the river, and putting down all his observations on the singular costumes worn by the natives of that little frequented country.

After Orellana, whose adventurous trip we have related, Pedro de Ursua was sent in 1559 by the Viceroy of Peru to seek for Lake Parima and the El Dorado. He was murdered by a rebel soldier, who committed all manner of outrages on his way down the river, and finished his course by being abandoned on Trinity Island.

Efforts of this kind did not throw much light on the course of the river. The Portuguese were more fortunate. In 1636 and 1637 Pedro Texeira with forty-seven canoes, and a large number of Spaniards and Indians, followed the Amazon as far as the junction of its tributary, the Napo, and then ascended, first it, and afterwards the Coca, to within thirty miles of Quito, which he reached with a few men.

The map drawn up by Sanson after this trip, and as a matter of course copied by all geographers, was extremely defective, and until 1717 there was no other. At that time the copy of a map drawn up by Father Fritz, a German missionary, came out in Volume xii. of the *Lettres Edifiantes,* a valuable publication, containing a multitude of interesting historical and geographical facts. In this map it was shown that the Napo is not the true source of the Amazon, and that the latter, under the name of the Marañon, issues from Lake Guanuco, thirty leagues east of Lima. The lower portion of the course of the river was badly drawn, as Father Fritz was too ill when he went down it to observe closely.

Leaving Tarqui, five leagues from Cuenca, on the 11th May, 1743, Condamine passed Zaruma, a town once famous for its gold mines, and having crossed several rivers on the hanging bridges, which look like huge hammocks slung from one side to the other, reached Loxa, four degrees from the line, and 400 fathoms lower than Quito. Here he noticed a remarkable difference of temperature, and found the mountains to be mere hills compared with those of Quito.

Between Loxa and Jaen de Bracamoros the last buttresses of the Andes are crossed. In this district rain falls every day throughout the year, so that a long stay cannot be made there. The whole country has declined greatly from its former prosperity. Loyola, Valladolid, Jaen, and the greater number of the Peruvian towns at a distance from the sea, and the main road between Carthagena and Lima, were in Condamine's time little more than hamlets. Yet forests of cocoanut trees grow all around Jaen, the natives thinking no more of them than they do of the gold dust brought down by their rivers.

Condamine embarked on the Chincipe, wider here than the Seine at Paris, and went down it as far as its junction with the Marañon, beyond which the latter river becomes navigable, although its course is broken by a number of falls and rapids, and in many places narrows till it is but twenty fathoms wide. The most celebrated of these narrows is the *pongo,* or gate, of Manseriche, in the heart of the Cordillera, where the Amazon has hewn for itself a bed only fifty-five fathoms wide, with all but perpendicular

sides. Condamine, attended by only a single negro, met with an almost unparalleled adventure on a raft in this pongo.

"The stream," he says, "the height of which had diminished twenty-five feet in thirty-six hours, continued to decrease in volume. In the middle of the night, part of a large branch of a tree caught between the woodwork of my boat, penetrating further and further as the latter sunk with the water, so that if I had not been awake and on guard at the time, I should have found myself hanging from a tree, on my raft. The least of the evils threatening me would have been the loss of my journals and notebooks, the fruit of eight years of work. Fortunately, I eventually found means to free my raft, and float it again."

In the midst of the woods near the ruined town of Santiago, where Condamine arrived on the 10th July, lived the Xibaro Indians, who had been for a century in revolt against the Spaniards, who tried to force them to labor in the gold mines.

Beyond the pongo of Manseriche a new world was entered, a perfect ocean of fresh water—a labyrinth of lakes, rivers, and channels, set in an impenetrable forest. Although he had lived in the open air for more than seven years, Condamine was struck dumb by this novel spectacle of water and trees only, with nothing else besides. Leaving Borja on the 14th July, the traveler soon passed the mouth of the Morona, which comes down from the volcano of Sangay, the ashes from which are sometimes flung beyond Guayaquil. He next passed the three mouths of the Pastaca, a river at this time so much swollen that the width of no one of its mouths could be estimated.

On the 19th of the same month Condamine reached Laguna, where Pedro Maldonado, governor of the province of Esmeraldas, who had come down the Pastaca, had been waiting for him for six weeks. At this time Laguna was a large community, of some thousand Indians capable of bearing arms, who recognized the authority of the missionaries of the different tribes.

"In making a map of the course of the Amazon," says Condamine, "I provided myself with a resource against the *ennui* of a quiet voyage with nothing to break the monotony of the scenery, though that scenery was new to me.

My attention was continually on the strain as, compass and watch in hand, I noted the deflexions in the course of the river, the time occupied in passing from one bend to another, the variations in the breadth of its bed and in that of the mouths of its tributaries, the angle formed by the latter at the confluence, the position and size of the islands, and above all the rate of the current and that of the canoe. Now on land and now in the canoe, employing various modes of measurement, which it would be superfluous to explain here, every instant was occupied. I often sounded, and measured geometrically the breadth of the river and that of its tributaries. I took the height of the sun at the meridian every day, and I noted its amplitude at its rising and setting, wherever I went."

On the 25th July, after having passed the Tigre River, Condamine came to a new mission station, that of a tribe called Yameos, recently rescued from the woods by the Fathers. Their language is difficult to learn, and their mode of pronouncing it extraordinary. Some of their words are nine or ten syllables long, and yet they can only count up to three. They use a kind of pea-shooter with great skill, firing from it small arrows tipped with a poison which causes instantaneous death.

The following day the explorer passed the mouth of the Ucayale, one of the most important of the tributaries of the Marañon, and which might even be its source. Beyond it the main stream widens sensibly.

Condamine reached on the 27th the mission station of the Omaguas, formerly a powerful nation, whose dwelling extended along the banks of the Amazon for a distance of 200 leagues below the Napo. Originally strangers in the land, they are supposed to have come down some river rising in Granada, and to have fled from the Spanish yoke. The word Omagua means flat-head in Peruvian, and these people have the singular custom of squeezing the foreheads of new-born babies between two flat pieces of wood, to make them, as they say, resemble the full moon. They also use two curious plants, the floripondio and the curupa, which makes them drunk for twenty-four hours, and causes very wonderful dreams. So that opium and hatchich have their counterparts in Peru.

Cinchona, ipecacuanha, simaruba, sarsaparilla, guaiacum,

cocoa, and vanilla grow on the banks of the Marañon, as does also a kind of india rubber, of which the natives make bottles, boots, and syringes, which, according to Condamine, require no piston. They are of the shape of hollow pears, and are pierced at the end with a little hole, into which a pipe is fitted. This contrivance is much used by the Omaguas; and when a fête is given, the host, as a matter of politeness, always presents one to each of his guests, who use them before any ceremonial banquet.

Changing boats at San Joaquin, Condamine arrived at the mouth of Napo in time to witness, during the night of the 31st July or the 1st August, the emersion of the first satellite of Jupiter, so that he was able to determine exactly the latitude and longitude of the spot—a valuable observation, from which all other positions on the journey could be calculated.

Pevas, which was reached the next day, is the last of the Spanish missions on the Marañon. The Indians collected there were neither all of the same race nor all converts to Christianity. They still wore bone ornaments in the nostrils and the lips, and had their cheeks riddled with holes, in which were fixed the feathers of birds of every color.

St. Paul is the first Portuguese mission. There the river is no less than 900 fathoms wide, and often rises in violent storms. The traveler was agreeably surprised to find the Indian women possessed of pet birds, locks, iron keys, needles, looking glasses, and other European utensils, procured at Para in exchange for cocoa. The native canoes are much more convenient than those used by the Indians of the Spanish possessions. They are in fact regular little brigantines, sixty feet long by seven wide, manned by forty oarsmen.

Between St. Paul and Coari several large and beautiful rivers flow into the Amazon. On the south the Yutay, Yuruca, Tefé, and Coari; on the north the Putumayo and Yupura. On the shores of the last named river lives a cannibal race. Here Texeira set up a barrier, on the 26th June, 1639, which was to mark the frontier between the district in which the Brazilian and Peruvian languages respectively were to be used in dealing with the Indians.

Purus River and the Rio Negro, connecting the Orinoco with the Amazon, the banks dotted with Portuguese mis-

sions under the direction of the monks of Mount Carmel, were successively surveyed. The first reliable information on the important geographical fact of the communication between the two great rivers, is to be found in the works of Condamine, and his sagacious comments on the journeys of the missionaries who preceded him. It was in these latitudes that the golden lake of Parimé and the fabulous town of Manoa del Dorado are said to have been situated. Here, too, lived the Manaos Indians, who so long resisted the Portuguese.

Now were passed successively the mouth of the Madera River—so called on account of the quantity of timber which drifts down from it, the port of Pauxis—beyond which the Marañon takes the name of the Amazon, and where the tide begins to be felt, although the sea is more than 200 miles distant—and the fortress of Topayos, at the mouth of a river coming down from the mines of Brazil, on the borders of which live the Tupinambas.

Not until September did the mountains come in sight on the north—quite a novel spectacle, since for two months Condamine had not seen a single hill. They were the first buttresses of the Guiana chain.

On the 6th September, opposite Fort Paru, Condamine left the Amazon, and passed by a natural canal to the Xingu River, called by Father D'Acunha the Paramaribo. The port of Curupa was then reached, and lastly Para, a large town, with regular streets and houses of rough or hewn stone. To complete his map, the explorer was obliged to visit the mouth of the Amazon, where he embarked for Cayenne, arriving there on the 20th February, 1774.

This long voyage had the most important results. For the first time the course of the Amazon had been laid down in a thoroughly scientific manner, and the connection between it and the Orinoco ascertained. Moreover Condamine had collected a vast number of interesting observations on natural history, physical geography, astronomy, and the new science of anthropology, which was then in its earliest infancy.

We have now to relate the travels of a man who recognized, better than any one else had done, the connection between geography and the other physical sciences. We allude to Alexander von Humboldt. To him is due the

credit of having opened to travelers this fertile source of knowledge.

Born at Berlin, in 1759, Humboldt's earliest studies were carried on under Campe, the well-known editor of many volumes of travels. Endowed with a great taste for botany, Humboldt made friends at the university of Göttingen with Forster the younger, who had just made the tour of the world with Captain Cook. This friendship, and the enthusiastic accounts given of his adventures by Forster, probably did much to rouse in Humboldt a longing to travel. He took the lead in the study of geology, botany, chemistry, and animal magnetism; and to perfect himself in the various sciences, he visited England, Holland, Italy, and Switzerland. In 1797, after the death of his mother, who objected to his leaving Europe, he went to Paris, where he became acquainted with Aimé Bonpland, a young botanist, with whom he at once agreed to go on several exploring expeditions.

It had been arranged that Humboldt should accompany Captain Baudin, but the delay in the starting of his expedition exhausted the young enthusiast's patience, and he went to Marseilles with the intention of joining the French army in Egypt. For two whole months he waited for the sailing of the frigate which was to take him; and, weary of inaction, he went to Spain with his friend Bonpland, in the hope of obtaining permission to visit the Spanish possessions in America.

This was no easy matter, but Humboldt was a man of rare perseverance. He was thoroughly well-informed, he had first-rate introductions, and he was, moreover, already becoming known. In spite, therefore, of the extreme reluctance of the government, he was at last authorized to explore the Spanish colonies, and take any astronomical or geodesic observations he chose.

The two friends left Corunna on the 5th of June, 1799, and reached the Canaries thirteen days later. Of course, as naturalists they were in duty bound not to land at Teneriffe without ascending the Peak.

"Scarcely any naturalist," says Humboldt in a letter to La Metterie, "who, like myself, has passed through to the Indies, has had time to do more than go to the foot of this colossal volcano, and admire the delightful gardens of

Orotava. Fortunately for me our frigate, the *Pizarro*, stopped for six days. I examined in detail the layers of which the peak of Teyde is composed. We slept in the moonlight at a height of 1,200 fathoms. At two o'clock in the morning we started for the summit, where we arrived at eight o'clock, in spite of the violent wind, the great heat of the ground, which burnt our boots, and the intense cold of the atmosphere. I will tell you nothing about the magnificent view, which included the volcanic islands of Lancerote, Canaria, and Gomera, at our feet; the desert, twenty leagues square, strewn with pumice-stone and lava, and without insects or birds, separating us from thickets of laurel-trees and heaths; or of the vineyards studded with palms, banana, and dragon-trees, the roots of which are washed by the waves. We went into the very crater itself. It is not more than forty or sixty feet deep. The summit is 1,904 fathoms above the sea-level, as estimated by Borda in a very careful geometric measurement. . . . The crater of the Peak—that is to say, of the summit—has been inactive for several centuries, lava flowing from the sides only. The crater, however, provides an enormous quantity of sulphur and sulphate of iron."

In July, Humboldt and Bonpland arrived at Cumana, in that part of America known as Terra Firma. Here they spent some weeks in examining the traces left by the great earthquake of 1797. They then determined the position of Cumana, which was placed a degree and a half too far north on all the maps—an error due to the fact of the current bearing to the north near La Trinidad, having deceived all travelers. In December, 1799, Humboldt wrote from Caracas to the astronomer Lalande:

"I have just completed an intensely interesting journey in the interior of Paria, in the Cordillera of Cocolar, Tumeri, and Guiri. I had two or three mules loaded with instruments, dried plants, etc. We penetrated to the Capuchin mission, which had never been visited by any naturalist. We discovered a great number of new plants, chiefly varieties of palms; and we are about to start for the Orinoco, and propose pushing on from it perhaps to San Carlos on the Rio Negro, beyond the equator. We have dried more than 1,600 plants, and described more than 500 birds, picked up numberless shells and insects, and I have made some

fifty drawings. I think that is pretty well in four months, considering the broiling heat of this zone."

During this first trip Humboldt visited the Chayma and Guarauno Missions. He also climbed to the summit of the Tumiriquiri, and went down into the Guacharo cavern, the entrance to which, framed as it is with the most luxuriant vegetation, is truly magnificent. From it issues a considerable river, and its dim recesses echo to the gloomy notes of birds. It is the Acheron of the Chayma Indians, for, according to their mythology and that of the natives of Orinoco, the souls of the dead go to this cavern. To go down into the Guacharo signifies in their language to die.

The Indians go into the Guacharo cavern once a year, in the middle of summer, and destroy the greater number of the nests in it with long poles. At this time many thousands of birds die a violent death, and the old inhabitants of the cave hover above the heads of the Indians with piercing cries, as if they would defend their broods.

The young birds which fall to the ground are opened on the spot. Their peritoneum is covered with a thick layer of fat, extending from the abdomen to the anus, and forming a kind of cushion between the legs. At the time called at Caripe the oil harvest, the Indians build themselves huts of palm leaves outside the cavern, and then light fires of brushwood, over which they hang clay pots filled with the fat of the young birds recently killed. This fat, known under the name of the Guacharo oil or butter, is half-liquid, transparent, without smell, and so pure that it can be kept a year without turning rancid.

Humboldt continues: "We passed fifteen days in the Caripe valley, situated at a height of 952 Castilian varas above the sea-level, and inhabited by naked Indians. We saw some black monkeys with red beards. We had the satisfaction of being treated with the greatest kindness by the Capuchin monks and the missionaries living amongst these semi-barbarous people."

From the Caripe valley the two travelers went back to Cumana by way of the Santa Maria Mountains and the Catuaro missions, and on the 21st of November they arrived—having come by sea—at Caracas, a town situated in the midst of a valley rich in cocoa, cotton, and coffee, yet with a European climate.

Humboldt turned his stay at Caracas to account by studying the light of the stars of the southern hemisphere, for he had noticed that several, notably the Altar, the Feet of the Centaur, and others, seemed to have changed since the time of La Caille.

At the same time he put his collections in order, despatching part of them to Europe, and most thoroughly examined some rocks, with a view to ascertaining of what materials the earth's crust was here composed.

After having explored the neighborhood of Caracas, and ascended the Silla, which, although close to the town, had never been scaled by any native, Humboldt and Bonpland went to Valencia, along the shores of a lake called Tacarigua by the Indians, and exceeding in size that of Neufchâtel in Switzerland. Nothing could give any idea of the richness and variety of the vegetation. But the interest of the lake consists not only in its picturesque and romantic beauty; the gradual decrease in the volume of its waters attracted the attention of Humboldt, who attributed it to the reckless cutting down of the forests in its neighborhood, resulting in the exhaustion of its sources.

Near this lake Humboldt received proof of the truth of the accounts he had heard of an extraordinary tree, the palo de la vaca, or cow-tree, which yields a balsamic and very nutritive milk, drawn off from incisions made in the bark.

The most arduous part of the trip began at Porto Caballo, at the entrance to the llanos, or perfectly flat plains stretching between the hills of the coast and the Orinoco valley.

"I am not sure," says Humboldt, "that the first sight of the llanos is not as surprising as that of the Andes."

Nothing in fact could be more striking than this sea of grass, from which whirls of dust rise up continually, although not a breath of wind is felt at Calabozo, in the center of this vast plain. Humboldt first tested the power of the gymnotus, or electric eel, large numbers of which are met with in all the tributaries of the Orinoco. The Indians, who were afraid of exposing themselves to the electric discharge of these singular creatures, proposed sending some horses into the marsh containing them.

"The extraordinary noise made by the shoes of the horses," says Humboldt, "made the eels come out of the

ooze and prepare for battle. The yellowish livid gymnoti, resembling serpents, swam on the top of the water, and squeezed themselves under the bodies of the quadrupeds which had disturbed them. The struggle which ensued between animals so differently constituted presented a very striking spectacle. The Indians, armed with harpoons and long canes, surrounded the pond on every side, and even climbed into the trees, the branches of which stretched horizontally over the water. Their wild cries, as they brandished their long sticks, prevented the horses from running away and getting back to the shores of the pond; whilst the eels, driven mad by the noise, defended themselves by repeated discharges from their electric batteries. For a long time they appeared victorious, and some horses succumbed to the violence of the repeated shocks which they received upon their vital organs from every side. They were stunned, and sank beneath the water.

"Others, panting for breath, with manes erect, and wild eyes full of the keenest suffering, tried to fly from the scene, but the merciless Indians drove them back into the water. A very few, who succeeded in eluding the vigilance of the guards, regained the bank, stumbling at every step, and lay down upon the sands, exhausted with fatigue, every limb paralyzed from the electric shocks received from the eels.

"I never remember receiving a more terrible shock from a Leyden jar than I did from a gymnotus on which I accidentally trod just after it came out of the water."

The astronomic position of Calabozo having been determined, Humboldt and Bonpland resumed their journey to the Orinoco. The Uriticu, with its numerous and ferocious crocodiles, and the Apure, one of the tributaries of the Orinoco, the banks of which are covered with a luxuriant vegetation such as is only met with in the tropics, were successively crossed or descended.

The latter stream is flanked on either side by thick hedges, with openings here and there, through which boars, tigers, and other wild animals, made their way to quench their thirst. When the shades of night shut in the forest, so silent by day, it resounds with the cries of birds and the howling or roaring of beasts of prey, vying with each other as to which shall make the most noise.

While the Uriticu is inhabited by fierce crocodiles, the Apure is the home of a small fish called the "carabito," which attacks bathers with great fury, often biting out large pieces of flesh. It is only four or five inches long, but more formidable than the largest crocodile, and the waters it frequents are carefully avoided by the Indians, in spite of their fondness for bathing, and the relief it affords them, persecuted as they are by ants and mosquitos.

Our travelers went down the Orinoco as far as the Temi, which is connected by a short portage with the Cano-Pimichino, a tributary of the Rio Negro.

The banks of the Temi, and the adjacent forests, are often inundated, and then the Indians make waterways, two or three feet wide, between the trees. Nothing could be more quaint or imposing than floating amongst the gigantic growths, beneath their green foliage. Sometimes, three or four hundred leagues inland, the traveler comes upon a troop of fresh-water dolphins, spouting up water and compressed air in the manner which has gained for them the name of blowers.

It took four days to transport the canoes from the Tenir to the Cano-Pimichino, as a path had to be cleared with axes.

The Pimichino flows into the Rio Negro, which is in its turn a tributary of the Amazon.

Humboldt and Bonpland went down the Rio Negro as far as San Carlos, and then up the Casiquiaro, an important branch of the Orinoco, which connects it with the Rio Negro. The shores of the Casiquiaro are inhabited by the Ydapaminores, who live entirely on smoked ants.

Lastly, the travelers went up the Orinoco nearly to its source, at the foot of the Duida volcano, where their further progress was stopped by the hostility of the Guaharibos and the Guaica Indians, who were skillful marksmen with the bow and arrow. Here was discovered the famous El Dorado lake, with its floating islets of talc.

Thus was finally solved the problem of the junction of the Orinoco and the Marañon, which takes place on the borders of the Spanish and Portuguese territories, two degrees above the equator.

The two travelers then floated with the current down the Orinoco, traversing by this means five hundred leagues in

twenty-five days, after which they halted for three weeks at Angostura, to tide over the time of the great heat, when fever is prevalent, regaining Cumana in October, 1800.

"My health," says Humboldt, "was proof against the fatigue of a journey of more than 1,300 leagues, but my poor comrade Bonpland, was, immediately on his return, seized with fever and sickness, which nearly proved fatal. A constitution of exceptional vigor is necessary to enable a traveler to bear the fatigue, privations, and interruptions of every kind with which he has to contend in these unhealthy districts, with impunity. We were constantly surrounded by voracious tigers and crocodiles, stung by venomous mosquitos and ants, with no food for three months but water, bananas, fish, and tapioca, now crossing the territory of the earth-eating Otomaques, now wandering through the desolate regions below the equator, where not a human creature is seen for 130 leagues. Few indeed are those who survive such perils and such exertions, fewer still are those who, having surmounted them, have sufficient courage and strength to encounter them a second time."

We have seen what an important geographical discovery rewarded the perseverance of the explorers who had completed the examination of the whole of the district north of the Amazon, between Popayan and the mountains of French Guiana. The results obtained in other branches of science were no less novel and important.

Humboldt had discovered that there exists amongst the Indians of the Upper Orinoco and the Rio Negro a race with extremely fair complexions, differing entirely from the natives of the coast. He also noticed the curious tribe of the Otomaques.

"These people," he says, "who disfigure their bodies with hideous paintings, eat nothing but loam for some three months, when the height of the Orinoco cuts them off from the turtles which form their ordinary food. Some monks say they mix earth with the fat of crocodiles' tails, but this is a very false assertion. We saw provisions made of unadulterated earth, prepared only by slow roasting and moistening with water."

Amongst the most curious of the discoveries made by Humboldt, we must mention that of the "curare," the virulent poison which he saw manufactured by the Catara-

peni and Maquiritare Indians, and a specimen of which he sent to the Institute with the "dapiche," a variety of India rubber hitherto unknown, being the gum which exudes spontaneously from the roots of the trees known as "jacio" and "cucurma," and dries underground.

Humboldt concluded his first journey by the exploration of the southern districts of San Domingo and Jamaica, and by a short stay in Cuba, where he and his companions made several experiments with a view to facilitating the making of sugar, surveyed the coast of the island, and took some astronomical observations.

These occupations were interrupted by the news of the starting of Captain Baudin, who, it was said, was to double Cape Horn and examine the coasts of Chili and Peru. Humboldt, who had promised to join the expedition, at once left Cuba, and crossed South America, arriving on the coast of Peru in time, as he thought, to receive the French navigator. Although Humboldt had throughout his long journey worked with a view to timing his arrival in the Peruvian capital to meet Baudin, it was only when he reached Quito that he ascertained that the new expedition was making for the Pacific by way of the Cape of Good Hope.

In May, 1801, Humboldt, still accompanied by the faithful Bonpland, embarked at Cartagena, whence he proposed going first to Santa Fé de Bogota, and then to the lofty plains of Quito. To avoid the great heat the travelers spent some time at the pretty village of Turbaco, situated on the heights overlooking the coast, where they made the necessary preparations for their journey. In one of their excursions in the neighborhood they visited a very strange region, of which their Indian guides had often spoken under the name of *Volcanitos*.

This is a volcanic district, set in a forest of palms, and of the tree called "tola," about two miles to the east of Turbaco. According to a legend, the country was at one time one vast collection of burning mountains, but the fire was quenched by a saint, who merely poured a few drops of holy water upon it.

In the center of an extensive plain Humboldt came upon some twenty cones of grayish clay, about twenty-five feet high, the mouths of which were full of water. As the travelers approached a hollow sound was heard, succeeded

in a few minutes by the escape of a great quantity of gas. According to the Indians these phenomena had recurred for many years.

Humboldt noticed that the gas which issues from these small volcanoes was a far purer azote than could then be obtained by chemical laboratories.

Santa Fé is situated in a valley 8,600 feet above the sea-level. Shut in on every side by lofty mountains, this valley appears to have been formerly a large lake. The Rio Bogota which receives all the waters of the valley, has forced a passage for itself near the Tequendama farm, on the southwest of Santa Fé, beyond which it leaves the plain by a narrow channel and flows into the Magdalena basin. As a natural consequence, were this passage blocked, the whole plain of Bogota would be inundated and the ancient lake restored. There exists amongst the Indians a legend similar to that connected with Roland's Pass in the Pyrenees, telling how one of their heroes split open the rocks and drained dry the valley of Bogota, after which, content with his exploit, he retired to the sacred town of Eraca, where he did penance for 2,000 years, inflicting upon himself the greatest torture.

The cataract of Tequendama, although not the largest in the world, yet affords a very beautiful sight. When swollen by the addition of all the waters of the valley, the river, a little above the Falls, is 175 feet wide, but on entering the defile which appears to have been made by an earthquake, it is not more than forty feet in breadth. The abyss into which it flings itself, is no less than 600 feet deep. Above this vast precipice constantly rises a dense cloud of foam, which, falling again almost immediately, is said to contribute greatly to the fertility of the valley.

Nothing could be more striking than the contrast between the valley of the Rio Bogota and that of the Magdalena: the one with the climate and productions of Europe, the corn, the oaks and other trees of our native land; the other with palms, sugar-canes, and all the growths of the tropics.

One of the most interesting of the natural curiosities met with by our travelers on the trip, was the bridge of Jcononzo, which they crossed in September, 1801. At the bottom of one of the contracted ravines, known as "cañons," peculiar to the Andes, a little stream, the Rio Suma Paz, has forced

for itself a narrow channel. To cross this river would be impossible, had not nature herself provided two bridges, one above the other, which are justly considered marvels of the country.

Three blocks of rock detached from one of the mountains by the earthquake which produced this mighty fissure, have so fallen as to balance each other and form a natural arch, to which access is obtained by a path along the precipice. In the center of this bridge there is an opening through which the traveler may gaze down into the infinite depth of the abyss, at the bottom of which rolls the torrent, its terrible roar mingled with the incessant screaming of thousands of birds. Sixty feet above this bridge is a second, fifty feet long by forty wide, and not more than eight feet thick in the middle. To serve as a parapet, the natives have made a slender balustrade of reeds along the edges of this second bridge, from which the traveler can obtain a fine view of the magnificent scene beneath him.

The heavy rain and bad roads made the journey to Quito very exhausting, but for all that Humboldt and Bonpland only halted there for an absolutely necessary rest, quickly pressing on for the Magdalena valley, and the magnificent forests clothing the sides of the Trinidiu in the Central Andes.

This mountain is considered one of the most difficult to cross in the whole chain. Even when the weather is favorable, twelve days, at least, are necessary for traversing the forests, in which not a human creature is seen and no food can be obtained. The highest point is 1,200 feet above the sea-level, and the path leading up to it is in many parts only one foot wide. The traveler is generally carried, bound to a chair in a sitting posture, on the back of a native, as a porter carries a trunk.

"We preferred to go on foot," says Humboldt in a letter to his brother, "and the weather being very fine we were only seventeen days in these solitudes, where not a trace is to be seen of any inhabitant. The night is passed in temporary huts made of the leaves of the heliconia, brought on purpose. On the western slopes of the Andes marshes have to be crossed, into which one sinks up to the knees; and the weather having changed when we reached them, it rained in torrents for the last few days. Our boots rotted on our

feet, and we reached Carthago with naked and bleeding feet, but enriched with a fine collection of new plants.

"From Carthago we went to Popayan by way of Buga, crossing the fine Cauca valley, and skirting along the mountain of Choca, with the plantina-mines for which it is famous.

"We spent October, 1801, at Popayan, whence we made excursions to the basaltic mountains of Julusuito and the craters of the Puracé volcano, which discharge hydrosulphuric steam and porphyritic granite with a terrible noise. . . .

"The greatest difficulties were met with in going from Popayan to Quito. We had to pass the Pasto Paramos, and that in the rainy season, which had now set in. A 'paramo' in the Andes is a district some 1,700 or 2,000 fathoms high, where vegetation ceases, and the cold is piercing.

"We went from Popayan to Almager and thence to Pasto, at the foot of a terrible volcano, by way of the fearful precipices forming the ascent to the summit of the Cordillera, thus avoiding the heat of the Patia valley, where one night will often bring on the fever known as the *Calentura de Patia,* lasting three or four months."

The province of Pasto consists entirely of a frozen plateau almost too lofty for any vegetation to thrive on it, surrounded by volcanoes and sulphur-mines from which spiral columns of smoke are perpetually issuing. The inhabitants have no food but batatas, and when they run short they are obliged to live upon a little tree called "achupalla," for which they have to contend with the bear of the Andes. After being wet through night and day for two months, and being all but drowned in a sudden flood, accompanied by an earthquake near the town of Jbarra, Humboldt and Bonpland arrived on the 6th of January, 1801, at Quito, where they were received in cordial and princely style by the Marquis of Selva-Alegre.

Quito is a fine town, but the intense cold and the barren mountains surrounding it make it a gloomy place to stay in. Since the great earthquake of the 4th of February, 1797, the temperature has considerably decreased, and Bouguer, who registered it at an average of from 15° to 16° would be surprised to find it varying from 4° to 10° Reaumur. Coto-

paxi and Pinchincha, Antisana and Illinaza, the various craters of one subterranean fire, were all examined by the travelers, a fortnight being devoted to each.

Humboldt twice reached the edge of the Pinchincha crater, never before seen except by Condamine.

"I made my first trip," he says, "accompanied only by an Indian. Condamine had approached the crater by the lower part of its edge which was covered with snow, and in this first attempt I followed his example. But we nearly perished. The Indian sank to the breast in a crevasse, and we found to our horror that we were walking on a bridge of frozen snow, for a little in advance of us there were some holes through which we could see the light. Without knowing it we were in fact on the vaults belonging to the crater itself. Startled, but not discouraged, I changed my plan. From the outer rim of the crater, flung as it were upon the abyss, rise three peaks, three rocks, which are not covered with snow, because the steam from the volcano prevents the water from freezing. I climbed upon one of these rocks and on the top of it found a stone attached on one side only to the rock and undermined beneath, so as to protrude like a balcony over the precipice. This stone was but about twelve feet long by six broad, and is terribly shaken by the frequent earthquakes, of which we counted eighteen in less than thirty minutes. To examine the depths of the crater thoroughly we lay on our faces, and I do not think imagination could conceive anything drearier, more gloomy, or more awful than what we saw. The crater consists of a circular hole nearly a league in circumference, the jagged edges of which are surrounded by snow. The interior is of pitchy blackness, but so vast is the gulf that the summits of several mountains situated in it can be made out at a depth of some 300 fathoms, so only fancy where their bases must be!

"I have no doubt that the bottom of the crater must be on a level with the town of Quito. Condamine found this volcano extinct and covered with snow, but we had to take the bad news to the inhabitants of the capital that the neighboring burning mountain is really active."

Humboldt ascended the volcano of Antisana to a height of 2,773 fathoms, but could go no further, as the cold was so intense that the blood started from the lips, eyes, and

gums of the travelers. It was impossible to reach the crater of Cotopaxi.

On the 9th June, 1802, Humboldt, accompanied by Bonpland, started from Quito to examine Chimborazo and Tungurunga. The peak of the latter fell in during the earthquake of 1797, and Humboldt found its height to be but 2,531 fathoms, whilst in Condamine's time it was 2,620 fathoms.

From Quito the travelers went to the Amazon by way of Lactacunga, Ambato and Rio-Bamba situated in the province laid waste by the earthquake of 1797, when 40,000 inhabitants were swallowed up by water and mud. Going down the Andes, Humboldt and his companions had an opportunity of admiring the remains of the Yega road, leading from Cusco to Assuay, and known as the Inca's road. It was built entirely of hewn stones, and was very straight. It might have been taken for one of the best Roman roads. In the same neighborhood are the ruins of a palace of the Inca Fupayupangi, described by Condamine in the minutes of the Berlin Academy.

After a stay of ten days at Cuença, Humboldt entered the province of Jaen, surveyed the Marañon as far as the Rio Napo, and with the aid of the astronomical observations he was able to make, supplemented Condamine's map. On the 23d October, 1802, Humboldt entered Lima, where he successfully observed the transit of Mercury.

After spending a month in that capital he started for Guayaquil, whence he went by sea to Acapulco in Spanish America.

The vast number of notes collected by Humboldt during the year he spent in Mexico, and which led to the publication of his Essay on Spanish America, would, after what we have said of his previous proceedings, be enough to prove, if proof were needed, what a passion he had for knowledge, how indomitable was his energy and how immense his power of work.

At one and the same time he was studying the antiquities and the history of Mexico, the character, customs, and language of its people, and taking observations in natural history, physical geography, chemistry, astronomy, and topography.

The Tasco, Moran, and Guanajuato mines, which yield a

profit of several million piastres per annum, first attracted the attention of Humboldt, who had early studied geology. He then examined the Jerullo volcano, which, although situated in the center of an immense plain thirty-six leagues from the sea, and more than forty from any volcano, discharged earth on the 29th September, 1759, and formed a mountain of cinders and clay 1,700 feet high.

In Mexico the travelers were able to obtain everything necessary to the arrangement of the immense collections they had accumulated, to classify and compare the observations each had taken, and to prepare their geographical map for publication.

Finally, in January, 1804, they left Acapulco to examine the eastern slopes of the Cordilleras, and to take the dimensions of the two lofty Puebla volcanoes.

"Popocatepetl," says Desborough Cooly, "is always active, although nothing but smoke and ashes have issued from its crater for centuries. It is not only 2,000 feet higher than the loftiest mountains of Europe, but is also the loftiest mountain in Spanish America." In spite of the great quantity of snow which had recently fallen, Humboldt accomplished the ascent of the Cofre, 1,300 feet higher than the peak of Teneriffe, obtaining from its summit, an extensive and varied view, embracing the Puebla plain and the eastern slopes of the Mexican Cordilleras, clothed with thick forests of "liquidambar," tree-ferns and sensitive plants. The travelers were able to make out the port of Vera Cruz, the castle of San Juan d'Ulloa and the sea shore.

This mountain owes its name of Cofre to a naked rock of pyramidal form which rises like a tower from its summit at a height of 500 feet.

After this last trip Humboldt went down to Vera Cruz, and having fortunately escaped the yellow fever then decimating the population, he set sail for Cuba, where he had left the greater part of his collection, going thence to Philadelphia. There he remained a few weeks to make a cursory study of the political constitution of the United States, returning to Europe in August, 1804.

The results of Humboldt's travels were such, that he may be justly called the discoverer of Equinoctial America, which before his time had been explored without becoming really known, while many of its innumerable riches were abso-